THE SCHOOL AND THE CHILD

JOHN DEWEY

EDITED BY J. J. FINDLAY

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The
School and the Child

BEING SELECTIONS FROM
THE EDUCATIONAL ESSAYS OF

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CONTENTS

Page
INTRODUCTION 5
THE CHILD AND THE CURRICULUM 17

ESSAYS FROM
THE ELEMENTARY SCHOOL RECORD

No. 1. THE KINDERGARTEN 48
No. 2. GENERAL PRINCIPLES OF WORK, EDUCATIONALLY CONSIDERED 63
No. 3. HISTORICAL DEVELOPMENT OF INVENTIONS AND OCCUPATIONS 70
No. 4. CHILDREN OF EIGHT YEARS OF AGE . . 74
No. 5. PSYCHOLOGY OF OCCUPATIONS 81
No. 6. REFLECTIVE ATTENTION 89
No. 7. THE AIM OF HISTORY IN ELEMENTARY EDUCATION 95
No. 8. THE PSYCHOLOGY OF THE ELEMENTARY CURRICULUM 105

~~Ed 154~~
Ed 118

INTRODUCTION

The school and its teachers are reckoned, in all countries, among the most conservative of social agencies, and as observed during any short period, very little progress appears to be made; yet if a man in middle life looks back for twenty or thirty years, he has to admit that forces of quite a radical nature have been all the time at work, which change, within a generation, the aspect of school. Now in our country these forces have almost entirely found their impulse from *outside* the teaching body. New tendencies, in politics, in commerce, in moral and religious experience, in social relations, have reacted on the school and re-shaped the demands which the community has made from its children. Thus Science Teaching, Modern Language, Manual Training, School Games, one after the other have made their claims felt, and we teachers, stirred by these *external* stimuli, have modified our practice—not always, one fears, for our scholars' advantage.

In foreign countries, on the other hand, while the same tendency has been always at work (for it is an inevitable feature of progress in a calling so intimately bound up with the common welfare), nevertheless one finds also that the forces that make for change have been guided at times very powerfully by the teachers themselves. In Switzerland and Germany the names of Pestalozzi, Herbart, Froebel stand for principles of action which, through the influence of their disciples, have effectively and permanently moulded the life of school. And in the United States the same may be said of the late Francis Parker—and perhaps of Horace Mann at an earlier epoch.

In England we can point to Arnold of Rugby, but with that exception it is fairly safe to say that no *great* teachers have arisen whose influence has been of the same fundamental character. It is outside the purpose of this introduction to enquire as to reasons for this difference, nor need our national *amour propre* be offended by the comparison. Scientific truth is not bounded by land or sea, and as Germany and America have reaped generously from the work of English scholars and men of science in other fields, we need not complain that the chief contributions to research in school education have been made beyond our shores. Our task is to sift the grain from the chaff, to test by our own work among children the value of the discoveries made by these great men; to exhibit the permanent principles which underlie their procedure, while discarding local and temporary details.[1]

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[1] Compare Dewey on Froebel, p. 51 below.

Now the conditions under which education has developed during the last twenty years in America would lead us to expect results of more than temporary or local importance. The people believe in the school, and look to it to do great things for them. Their leaders are untrammelled by the traditions that hold us back in the East; the ferment of new social ideals touches the life of school far more than is possible in countries where the hands of Church and State guide the teacher step by step: hence the student of education can survey the situation, and undertake his investigations with a sense of encouragement and freedom which with us would imply revolt against the existing order.

This restlessness has been witnessed to an increasing extent for many years past. At first the American teachers flocked to Germany—young Francis Parker, before 1870, was sitting at the feet of Ritter in Berlin,—and already in the '80s, Froebel had become a teacher for America more than for Europe; and when, early in the '90s, I heard of Herbart, and of Jena, I found already at work with Professor Rein a band of eager young teachers from the western states who were transplanting the Herbartian banner to Illinois.

This period of discipleship presently came to a close: there were friendly critics at hand in men such as William Harris and Murray Butler, who could speak with the authority of great philosophers;

there were students of child nature, such as Earl Barnes and Stanley Hall. With much keen rivalry and discussion these leaders challenged the strict shibboleths imported from Germany, and led the teachers to a deeper search for truth. The National Herbart Society founded in 1895 became in 1902 The National Society for the Scientific Study of Education, and the change of title indicated a decisive change in purpose and in outlook; the time for discipleship was passed, and the time for independent research and reconstruction had arrived.

It is not surprising that this ferment of ideas among American teachers should produce a new pedagogic literature. At the present moment almost every month sees the issue of some new exposition of education. No doubt some of the work is poor, but much of it is of high merit; and after reading in succession a number of these books, one is compelled to admit that these investigators are definitely creating a new "school", are finding new foundations for educational practice. They are not all of one mind, but they are sufficiently in touch with each other to be regarded as allies in the task on which they are engaged.

Among those who have played a part in this task of reconstruction I am inclined to regard John Dewey as the chief, and I am not alone in this opinion. I judge chiefly from his writings; but if reasons are to be sought for the influence which his writings exert, I should attribute it to the fact that he was engaged during these years of ferment in conducting a school for young children, and in observing the experience of children under his charge, in the presence of teachers and students who were seeking to reconcile theory and practice.

I have therefore taken occasion, with the approval of Professor Dewey, to put together a few of his contributions which have not been published in this country, and which would not come within the reach of English teachers unless brought out in an inexpensive volume of this kind. The first of these, which is at present out of print in the United States, also gives the title to the volume,[1] and I am sanguine enough to believe that it will in days to come be recognized as an educational classic.

The rest of the book consists of a series of essays taken from *The Elementary School Record.* [I have added, in an Appendix, particulars relating to this and other volumes, for the sake of readers who are able to pursue their enquiries further.] The *Record* consists of a series of monographs sketching the courses of study which were pursued in this University elementary school. Most of the numbers are out of print, and I have no information as to whether it is likely to be re-issued. I understand that when Professor Dewey left Chicago a year ago to take the Chair of Philosophy in Columbia, this school changed its character and became incorporated with the larger Institute which Chicago owes to Francis Parker; hence it may not be the intention of Professor Dewey or of his late colleagues to republish these papers, although the entire publication is of unique interest to students of education.

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[1] Since writing the above I notice that this same title (*The Child and the Curriculum*) has been selected for the title of an English work of a different character; so an alteration has been made which will serve to keep the two books distinct in the English market.

The series of papers which I have selected are, in reality, studies in genetic psychology. When read in succession as here printed, they afford a view of certain features of children's minds, as changing in aspect between the ages of four and twelve. Some teachers, in their anxiety to reap a harvest without the delays of spring and summer, would rather have been supplied with the detailed courses of study pursued by the children; but they will be better advised to fasten their attention first upon the phenomena of child-life, and then copy Professor Dewey's example and seek to discover, by experiment, whether his interpretations are of universal validity. And if I had reprinted these courses of study, many of the details would have been of little use to us in England: they contain those local and temporary details to which I have referred above, and would serve rather to distract the student's attention from the main problem.

I may add that this little volume may grow to larger proportions if the desire is expressed: a second series of Dewey's Contributions will be forthcoming if the publishers find that the first is appreciated by English readers. I conclude with a few observations, arising out of the methods pursued by Professor Dewey, and suggestive for the study of Education in this country.

(*a*) The addresses given by Professor Dewey to parents attending his school are contained in a small volume entitled *School and Society* (*vide* Appendix). One feature of the work is worth noting: Professor Dewey insisted upon securing the services of "thoroughly-educated teachers", with advanced knowledge in the Science, History, Manual Training, Music, &c. for which they were responsible. "The presence of an organized corps of instructors demonstrates that thoroughly-educated teachers are ready to bring to elementary education the same resources of training, knowledge, and skill that have long been at the command of higher education." Another quotation from this book will show that the work was conducted in the true spirit of scientific investigation:—"When the school was started there were certain ideas in mind—perhaps it would be better to say questions and problems; certain points which it seemed worth while to test. If you will permit one personal word, I should like to say that it is sometimes thought that the school started out with a number of ready-made principles and ideas which were to be put into practice at once. It has been popularly assumed that I am the author of these ready-made ideas and principles, but there has been a gradual development of the educational principles and methods involved, *not* a fixed equipment. The teachers started with question marks, rather than with fixed rules, and if any answers have been reached, it is the teachers in the schools who have supplied them. We started upon the whole with four such questions or problems:

"1. What can be done, and how can it be done, "to bring the school into closer relation with the home and neighbourhood life—instead of having the school a place where the child comes solely to learn certain lessons?

"2. What can be done in the way of introducing subject-matter in history and science and art, that shall have a positive value and real significance in the child's own life: that shall represent, even to the youngest children, something worthy of attainment in skill or knowledge; as much so to the little pupils as are the studies of the high school or college student to him?

"3. How can instruction in the formal, symbolic branches—the mastering of the ability to read, write, and use figures intelligently—be carried on with everyday experience and occupation as their background and in definite relations to other studies of more inherent content; and be carried on in such a way that the child shall feel their necessity through their connection with subjects which appeal to him on their own account?

"4. Individual attention.

"I think these four points present a fair statement of what we have set out to investigate. The school is often called an experimental school, and in one sense that is the proper name. We have attempted to find out by trying, by doing—not alone by discussing and theorizing—*whether* these problems may be worked out, and *how* they may be worked out."

I submit this statement[1] by a university professor under the obligation to search, and re-search, for truth, as being well in line with the attitude and sense of duty which is exhibited in all university departments worthy of the name.[2] Universities have no concern with the training of young people for a profession unless they combine the obligation to teach and "train" with the obligation to investigate and advance the boundaries of knowledge. It will surely be admitted that the four problems set out above are as worthy of investigation in a university as any other group of scientific problems suggested for solution in the older established Departments of Science and Art whose services are so honourably recognized by public opinion.

(*b*) The essays from *The Elementary School Record* are, I think, worthy of attention in academic quarters from another point of view, that of their relation to genetic psychology. The inevitable tendency in our modern universities is to lay emphasis upon studies which have a direct bearing upon some career in life. The new Departments or Faculties which find favour and public support are Chemistry, Engineering, Law, Theology, Commerce: and the older studies, such as History and Literature, have to force a place for themselves within these if they can. This tendency to forsake "liberal" studies may be, for many reasons, deplorable, but it has to be reckoned with, and no branch of study has been affected by it more adversely than that crown of all academies—Philosophy. So far, indeed, has Philosophy been dethroned that the latest university to receive a Charter from the Crown has been approved without having a teacher of Philosophy in its society!

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[1] Readers should consult *The Relation of Theory to Practice in the Education of Teachers* (*vide* Appendix), for a fuller exposition of Dewey's views.

[2] Compare p. 106 below.

Now while the age and not the teachers of Philosophy are chiefly to blame for this neglect, I think that Dewey and Stanley Hall, both of high rank as philosophers, have shown that the philosophers are also a little at fault. We live in a time when the methods of biology, the study of growth and development, dominates our intellectual habits in every field; and these two investigators, the one by means chiefly of quantitative data, the other by means of direct observation of children, have helped us to understand human life in various grades of immaturity. By concentrating their attention on genetic psychology they have done capital service both to Philosophy and to Education: to Philosophy because speculation is unprofitable unless the millstones of the academy are continually fed with fresh grain; to Education because the teachers will willingly learn from the philosopher when he can offer them the fruits of experience and research among children. Some may say that Philosophy has a loftier mission and should not stoop to babes; but John Dewey is not the first who has shown us what may proceed "out of the mouths of babes and sucklings". To many in these modern days the Kingdom of Heaven takes the likeness of a palace of Truth, whereto none may attain save after much research and labour, of the kind called scientific; and in this kingdom, like that other of old times, we may perchance find —young children! Now, as then, we may well take heed that we despise not one of these little ones; for of such (in quite a modern sense) is the Kingdom of Heaven. Mankind is all of a piece, children and greybeards all of the same mould. Truth will not be served until the child's body and the child's mind are studied with the same devotion that we render to every other branch of philosophy and learning.

J. J. FINDLAY.

THE UNIVERSITY,
MANCHESTER, *September*, 1906.

THE CHILD AND THE CURRICULUM

Profound differences in theory are never gratuitous or invented. They grow out of conflicting elements in a genuine problem—a problem which is genuine just because the elements, taken as they stand, are conflicting. Any significant problem involves conditions that for the moment contradict each other. Solution comes only by getting away from the meaning of terms that is already fixed upon and coming to see the conditions from another point of view, and hence in a fresh light. But this reconstruction means travail of thought. Easier than thinking with surrender of already formed ideas and detachment from facts already learned, is just to stick by what is already said, looking about for something with which to buttress it against attack.

Thus sects arise; schools of opinion. Each selects that set of conditions that appeal to it; and then erects them into a complete and independent truth, instead of treating them as a factor in a problem, needing adjustment.)

(The fundamental factors in the educative process are an immature, undeveloped being; and certain social aims, meanings, values incarnate in the matured experience of the adult. The educative process is the due interaction of these forces. Such a conception of each in relation to the other as facilitates completest and freest interaction is the essence of educational theory.)

But here comes the effort of thought. It is easier to see the conditions in their separateness, to insist upon one at the expense of the other, to make antagonists of them, than to discover a reality to which each belongs. The easy thing is to seize upon something in the nature of the child, or upon something in the developed consciousness of the adult, and insist upon *that* as the key to the whole problem. When this happens a really serious practical problem—that of interaction—is transformed into an unreal, and hence insoluble, theoretic problem. Instead of seeing the educative steadily and as a whole, we see conflicting terms. We get the case of the child *v.* the curriculum; of the individual nature *v.* social culture. Below all other divisions in pedagogic opinion lies this opposition.

The child lives in a somewhat narrow world of personal contacts. Things hardly come within his experience unless they touch, intimately and obviously, his own well-being, or that of his family and friends. His world is a world of persons with their personal interests, rather than a realm of facts and laws. Not truth, in the sense of conformity to external fact, but affection and sympathy, is its key-note. As against this, the course of study met in the school presents material stretching back indefinitely in time, and extending outward indefinitely into space. The child is taken out of his familiar physical environment, hardly more than a square mile or so in area, into the wide world—yes, and even to the bounds of the solar system. His little span of personal memory and tradition is overlaid with the long centuries of the history of all peoples.

Again, the child's life is an integral, a total one. He passes quickly and readily from one topic to another, as from one spot to another, but is not conscious of transition or break. There is no conscious isolation, hardly conscious distinction. The things that occupy him are held together by the unity of the personal and social interests which his life carries along. Whatever is uppermost in his mind constitutes to him, for the time being, the whole universe. That universe is fluid and fluent; its contents dissolve and re-form with amazing rapidity. But, after all, it is the child's own world. It has the unity and completeness of his own life. He goes to school, and various studies divide and fractionize the world for him. Geography selects, it abstracts and analyses one set of facts, and from one particular point of view. Arithmetic is another division, grammar another department, and so on indefinitely.

Again, in school each of these subjects is classified. Facts are torn away from their original place in experience and rearranged with reference to some general principle. Classification is not a matter of child experience; things do not come to the individual pigeon-holed. The vitalities of affection, the connecting bonds of activity, hold together the variety of his personal experiences. The adult mind is so familiar with the notion of logically-ordered facts that it does not recognize—it cannot realize—the amount of separating and reformulating which the facts of direct experience have to undergo before they can appear as a "study", or branch of learning. A principle, for the intellect, has had to be distinguished and defined; facts have had to be interpreted in relation to this principle, not as they are in themselves. They have had to be regathered about a new centre which is wholly abstract and ideal. All this means a development of a special intellectual interest. It means ability to view facts impartially and objectively; that is, without reference to their place and meaning in one's own experience. It means capacity to analyse and to synthesize. It

8269

means highly-matured intellectual habits and the command of a definite technique and apparatus of scientific enquiry. The studies as classified are the product, in a word, of the science of the ages, not of the experience of the child.

These apparent deviations and differences between child and curriculum might be almost indefinitely widened. But we have here sufficiently fundamental divergences: first, the narrow but personal world of the child against the impersonal but infinitely-extended world of space and time; second, the unity, the single whole-heartedness of the child's life, and the specializations and divisions of the curriculum; third, an abstract principle of logical classification and arrangement, and the practical and emotional bonds of child-life.

From these elements of conflict grow up different educational sects. One school fixes its attention upon the importance of the subject-matter of the curriculum as compared with the contents of the child's own experience. It is as if they said: Is life petty, narrow, and crude? Then studies reveal the great, wide universe with all its fulness and complexity of meaning. Is the life of the child egoistic, self-centred, impulsive? Then in these studies is found an objective universe of truth, law, and order. Is his experience confused, vague, uncertain, at the mercy of the moment's caprice and circumstance? Then studies introduce a world

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arranged on the basis of eternal and general truth; a world where all is measured and defined. Hence the moral: ignore and minimize the child's individual peculiarities, whims, and experiences. They are what we need to get away from. They are to be obscured or eliminated. As educators our work is precisely to substitute for these superficial and casual affairs stable and well-ordered realities; and these are found in studies and lessons.

Subdivide each topic into studies: each study into lessons; each lesson into specific facts and formulæ. Let the child proceed step by step to master each one of these separate parts, and at last he will have covered the entire ground. The road which looks so long when viewed in its entirety, is easily travelled, considered as a series of particular steps. Thus emphasis is put upon the logical subdivisions and consecutions of the subject-matter. Problems of instruction are problems of procuring texts giving logical parts and sequences, and of presenting these portions in class in a similar definite and graded way. Subject-matter furnishes the end, and it determines method. The child is simply the immature being who is to be matured; he is the superficial being who is to be deepened; his is narrow experience which is to be widened. It is his to receive, to accept. His part is fulfilled when he is ductile and docile.

Not so, says the other sect. The child is the starting-point, the centre, and the end. His development, his growth, is the ideal. It alone furnishes the standard. To the growth of the child all studies are subservient; they are instruments valued as they serve the needs of growth. Personality, character, is more than subject-matter. Not knowledge or information, but self-realization, is the goal. To possess all the world of knowledge and lose one's own self is as awful a fate in education as in religion. Moreover, subject-matter never can be got into the child from without. Learning is active. It involves reaching out of the mind. It involves organic assimilation starting from within. Literally, we must take our stand with the child and our departure from him. It is he and not the subject-matter which determines both quality and quantity of learning.

The only significant method is the method of the mind as it reaches out and assimilates. Subject-matter is but spiritual food, possible nutritive material. It cannot digest itself; it cannot of its own accord turn into bone and muscle and blood. The source of whatever is dead, mechanical, and formal in schools is found precisely in the subordination of the life and experience of the child to the curriculum. It is because of this that "study" has become a synonym for what is irksome, and a lesson identical with a task.

This fundamental opposition of child and curriculum set up by these two modes of doctrine can be duplicated in a series of other terms. "Discipline" is the watchword of those who magnify the course of study; "interest" that of those who blazon "The Child" upon their banner. The stand-point of the former is logical; that of the latter psychological. The first emphasizes the necessity of adequate training and scholarship on the part of the teacher; the latter that of need of sympathy with the child, and knowledge of his natural instincts. "Guidance and control" are the catchwords of one school; "freedom and initiative" of the other. Law is asserted here; spontaneity proclaimed there. The old, the conservation of what has been achieved in the pain and toil of the ages, is dear to the one; the new, change, progress, wins the affection of the other. Inertness and routine, chaos and anarchism, are accusations bandied back and forth. Neglect of the sacred authority of duty is charged by one side, only to be met by counter-charges of suppression of individuality through tyrannical despotism.

Such oppositions are rarely carried to their logical conclusion. Common-sense recoils at the extreme character of these results. They are left to theorists, while common-sense vibrates back and forward in a maze of inconsistent compromise. The need of getting theory and practical common-sense into closer connection suggests a return to our original thesis: that we have here conditions which are necessarily related to each other in the educative process, since this is precisely one of interaction and adjustment.

What, then, is the problem? It is just to get rid of the prejudicial notion that there is some gap in kind (as distinct from degree) between the child's experience and the various forms of subject-matter that make up the course of study. From the side of the child, it is a question of seeing how his experience already contains within itself elements—facts and truths—of just the same sort as those entering into the formulated study; and, what is of more importance, of how it contains within itself the attitudes, the motives, and the interests which have operated in developing and organizing the subject-matter to the plane which it now occupies. From the side of the studies, it is a question of interpreting them as outgrowths of forces operating in the child's life, and of discovering the steps that intervene between the child's present experience and their richer maturity.

Abandon the notion of subject-matter as something fixed and ready-made in itself, outside the child's experience; cease thinking of the child's experience as also something hard and fast; see it as something fluent, embryonic, vital; and we realize that the child and the curriculum are simply two limits which define a single process. Just as two points define a straight line, so the present standpoint of the child and the facts and truths of studies define instruction. It is continuous reconstruction, moving from the child's present experience out into that represented by the organized bodies of truth that we call studies.

On the face of it, the various studies, arithmetic, geography, language, botany, &c., are themselves experience—they are that of the race. They embody the cumulative outcome of the efforts, the strivings, and successes of the human race generation after generation. They present this, not as a mere accumulation, not as a miscellaneous heap of separate bits of experience, but in some organized and systematized way—that is, as reflectively formulated.

Hence, the facts and truths that enter into the child's present experience, and those contained in the subject-matter of studies, are the initial and final terms of one reality. To oppose one to the other is to oppose the infancy and maturity of the same growing life; it is to set the moving tendency and the final result of the same process over against each other; it is to hold that the nature and the destiny of the child war with each other.

If such be the case, the problem of the relation of the child and the curriculum presents itself in this guise: Of what use, educationally speaking, is it to be able to see the end in the beginning? How does it assist us in dealing with the early stages of growth to be able to anticipate its later phases? The studies, as we have agreed, represent the possibilities of development inherent in the child's immediate crude experience. But, after all, they are not parts of that present and immediate life. Why, then, or how, make account of them?

Asking such a question suggests its own answer. To see the outcome is to know in what direction the present experience is moving, provided it move normally and soundly. The far-away point, which is of no significance to us simply as far away, becomes of huge importance the moment we take it as defining a present direction of movement. Taken in this way it is no remote and distant result to be achieved, but a guiding method in dealing with the present. The systematized and defined experience of the adult mind, in other words, is of value to us in interpreting the child's life as it immediately shows itself, and in passing on to guidance or direction.

Let us look for a moment at these two ideas: interpretation and guidance. The child's present experience is in no way self-explanatory. It is not final, but transitional. It is nothing complete in itself, but just a sign or index of certain growth-tendencies. As long as we confine our gaze to what the child here and now puts forth, we are confused and misled. We cannot read its meaning. Extreme depreciations of the child morally and intellectually, and sentimental idealizations of him, have their root in a common fallacy. Both spring from taking stages of a growth or movement as something cut off and fixed. The first fails to see the promise contained in feelings and deeds which, taken by themselves, are unpromising and repellent; the second fails to see that even the most pleasing and beautiful exhibitions are but signs, and that they begin to spoil and rot the moment they are treated as achievements.

What we need is something which will enable us to interpret, to appraise, the elements in the child's present puttings forth and fallings away, his exhibitions of power and weakness, in the light of some larger growth-process in which they have their place. Only in this way can we discriminate. If we isolate the child's present inclinations, purposes, and experiences from the place they occupy and the part they have to perform in a developing experience, all stand upon the same level; all alike are equally good and equally bad. But in the movement of life different elements stand upon different planes of value. Some of the child's deeds are symptoms of a waning tendency; they are survivals in functioning of an organ which has done its part and is passing out of vital use. To give positive attention to such qualities is to arrest development upon a lower level. It is systematically to maintain a rudimentary phase of growth. Other activities are signs of a culminating power and interest; to them applies the maxim of striking while the iron is hot. As regards them, it is perhaps a matter of now or never. Selected, utilized, emphasized, they may mark a turning-point for good in the child's whole career; neglected, an opportunity goes, never to be recalled. Other acts and feelings are prophetic; they represent the dawning of flickering light that will shine steadily only in the far future. As regards them there is little at present to do but give them fair and full chance, waiting for the future for definite direction.

Just as, upon the whole, it was the weakness of the "old education" that it made invidious comparisons between the immaturity of the child and the maturity of the adult, regarding the former as something to be got away from as soon as possible and as much as possible; so it is the danger of the "new education" that it regard the child's present powers and interests as something finally significant in themselves. In truth, his learnings and achievements are fluid and moving. They change from day to day and from hour to hour.

It will do harm if child-study leave in the popular mind the impression that a child of a given age has a positive equipment of purposes and interests to be cultivated just as they stand. Interests in reality are but attitudes toward possible experiences; they are not achievements; their worth is in the leverage they afford, not in the accomplishment they represent. To take the phenomena presented at a given age as in any way self-explanatory or self-contained is inevitably to result in indulgence and spoiling. Any power, whether of child or adult, is indulged when it is taken on its given and present level in consciousness. Its genuine meaning is in the propulsion it affords toward a higher level. It is just something to do with. Appealing to the interest upon the present plane means excitation; it means playing with a power so as continually to stir it up without directing it toward definite achievement. Continuous initiation, continuous starting of activities that do not arrive, is, for all practical purposes, as bad as the continual repression of initiative in conformity with supposed interests of some more perfect thought or will. It is as if the child were forever tasting and never eating; always having his palate tickled upon the emotional side, but never getting the organic satisfaction that comes only with digestion of food and transformation of it into working power.

As against such a view, the subject-matter of science and history and art serves to reveal the real child to us. We do not know the meaning either of his tendencies or of his performances excepting as we take them as germinating seed, or opening bud, of some fruit to be borne. The whole world of visual nature is all too small an answer to the problem of the meaning of the child's instinct for light and form. The entire science of physics is none too much to interpret adequately to us what is involved in some simple demand of the child for explanation of some casual change that has attracted his attention. The art of Rafael or of Corot is none too much to enable us to value the impulses stirring in the child when he draws and daubs.

So much for the use of the subject-matter in interpretation. Its further employment in direction or guidance is but an expansion of the same thought. To interpret the fact is to see it in its vital movement, to see it in its relation to growth. But to view it as a part of a normal growth is to secure the basis for guiding it. Guidance is not external imposition. *It is freeing the life-process for its own most adequate fulfilment.* What was said about disregard of the child's present experience because of its remoteness from mature experience; and of the sentimental idealization of the child's naïve caprices and performances, may be repeated here with slightly altered phrase. There are those who see no alternative between forcing the child from without, or leaving him entirely alone. Seeing no alternative, some choose one mode, some another. Both fall into the same fundamental error. Both fail to see that development is a definite process, having its own law, which can be fulfilled only when adequate and normal conditions are provided.

Really to interpret the child's present crude impulses in counting, measuring, and arranging things in rhythmic series, involves mathematical scholarship—a knowledge of the mathematical formulæ and relations which have, in the history of the race, grown out of just such crude beginnings. To see the whole history of development which intervenes between these two terms is simply to see what step the child needs to take just here and now; to what use he needs to put his blind impulse in order that it may get clarity and gain force.

If, once more, the "old education" tended to ignore the dynamic quality, the developing force inherent in the child's present experience, and therefore to assume that direction and control were just matters of arbitrarily putting the child in a given path and compelling him to walk there, the "new education" is in danger of taking the idea of development in altogether too formal and empty a way. The child is expected to "develop" this or that fact or truth out of his own mind. He is told to think things out, or work things out for himself, without being supplied any of the environing conditions which are requisite to start and guide thought. Nothing can be developed from nothing; nothing but the crude can be developed out of the crude—and this is what surely happens when we throw the child back upon his achieved self as a finality, and invite him to spin new truths of nature or of conduct out of that. It is certainly as futile to expect a child to evolve a universe out of his own mere mind as it is for a philosopher to attempt that task. Development does not mean just getting something out of the mind. It is a development of experience and into experience that is really wanted. And this is impossible save as just that educative medium is provided which will enable the powers and interests that have been selected as valuable to function. They must operate, and how they operate will depend almost entirely upon the stimuli which surround them, and the material upon which they exercise themselves. The problem of direction is thus the problem of selecting appropriate stimuli for instincts and impulses which it is desired to employ in the gaining of new experience. What new experiences are desirable, and thus what stimuli are needed, it is impossible to tell except as there is some comprehension of the development which is aimed at; except, in a word, as the adult knowledge is drawn upon as revealing the possible career open to the child.

It may be of use to distinguish and to relate to each other the logical and the psychological aspects of experience—the former standing for subject-matter in itself, the latter for it in relation to the child. A psychological statement of experience follows its actual growth; it is historic; it notes steps actually taken, the uncertain and tortuous, as well as the efficient and successful. The logical point of view, on the other hand, assumes that the development has reached a certain positive stage of fulfilment. It neglects the process and considers the outcome. It summarizes and arranges, and thus separates the achieved results from the actual steps by which they were forthcoming in the first instance. We may compare the difference between the logical and the psychological to the difference between the notes which an explorer makes in a new country, blazing a trail and finding his way along as best he may, and the finished map that is constructed after the country has been thoroughly explored. The two are mutually dependent. Without the more or less accidental and devious paths traced by the explorer there would be no facts which could be utilized in the making of the complete and related chart. But no one would get the benefit of the explorer's trip if it was not compared and checked up with similar wanderings undertaken by others; unless the new geographical facts learned, the streams crossed, the mountains climbed, &c., were viewed, not as mere incidents in the journey of the particular traveller, but (quite apart from the individual explorer's life) in relation to other similar facts already known. The map orders individual experiences, connecting them with one another irrespective of the local and temporal circumstances and accidents of their original discovery.

Of what use is this formulated statement of experience? Of what use is the map?

Well, we may first tell what the map is not. The map is not a substitute for a personal experience. The map does not take the place of an actual journey. The logically-formulated material of a science or branch of learning, of a study, is no substitute for the having of individual experiences. The mathematical formula for a falling body does not take the place of personal contact and immediate individual experience with the falling thing. But the map, a summary, an arranged and orderly view of previous experiences, serves as a guide to future experience; it gives direction; it facilitates control; it economizes effort, preventing useless wandering, and pointing out the paths which lead most quickly and most certainly to a desired result. Through the map every new traveller may get for his own journey the benefits of the results of others' explorations without the waste of energy and loss of time involved in their wanderings—wanderings which he himself would be obliged to repeat were it not for just the assistance of the objective and generalized record of their performances. That which we call a science or study puts the net product of past experience in the form which makes it most available for the future. It represents a capitalization which may at once be turned to interest. It economizes the workings of the mind in every way. Memory is less taxed because the facts are grouped together about some common principle, instead of being connected solely with the varying incidents of their original discovery. Observation is assisted; we know what to look for and where to look. It is the difference between looking for a needle in a hay-stack, and searching for a given paper in a well-arranged cabinet. Reasoning is directed, because there is a certain general path or line laid out along which ideas naturally march, instead of moving from one chance association to another.

There is, then, nothing final about a logical rendering of experience. Its value is not contained in itself; its significance is that of standpoint, outlook, method. It intervenes between the more casual, tentative, and roundabout experiences of the past, and more controlled and orderly experiences of the future. It gives past experience in that net form which renders it most available and most significant, most fecund for future experience. The abstractions, generalizations, and classifications which it introduces all have prospective meaning.

The formulated result is, then, not to be opposed to the process of growth. The logical is not set over against the psychological. The surveyed and arranged result occupies a critical position in the process of growth. It marks a turning-point. It shows how we may get the benefit of past effort in controlling future endeavour. In the largest sense the logical stand-point is itself psychological; it has its meaning as a point in the development of experience, and its justification is in its functioning in the future growth which it ensures.

Hence the need of reinstating into experience the subject-matter of the studies, or branches of learning. It must be restored to the experience from which it has been abstracted. It needs to be *psychologized*; turned over, translated into the immediate and individual experiencing within which it has its origin and significance.

Every study or subject thus has two aspects: one for the scientist as a scientist; the other for the teacher as a teacher. These two aspects are in no sense opposed or conflicting. But neither are they immediately identical. For the scientist, the subject-matter represents simply a given body of truth to be employed in locating new problems, instituting new researches, and carrying them through to a verified outcome. To him the subject-matter of the science is self-contained. He refers various portions of it to each other; he connects new facts with it. He is not, as a scientist, called upon to travel outside its particular bounds; if he does, it is only to get more facts of the same general sort. The problem of the teacher is a different one. As a teacher he is not concerned with adding new facts to the science he teaches; in propounding new hypotheses or in verifying them. He is concerned with the subject-matter of the science as *representing a given stage and phase of the development of experience.* His problem is that of inducing a vital and personal experiencing. Hence, what concerns him, as teacher, are the ways in which that subject may become a part of experience; what there is in the child's present that is usable with reference to it; how such elements are to be used; how his own knowledge of the subject-matter may assist in interpreting the child's needs and doings, and determine the medium in which the child should be placed in order that his growth may be properly directed. He is concerned, not with the subject-matter as such, but with the subject-matter as a related factor in a total and growing experience. Thus to see it is to psychologize it.

It is the failure to keep in mind the double aspect of subject-matter which causes the curriculum and child to be set over against each other as described in our early pages. The subject-matter, just as it is for the scientist, has no direct relationship to the child's present experience. It stands outside of it. The danger here is not a merely theoretical one. We are practically threatened on all sides. Text-book and teacher vie with each other in presenting to the child the subject-matter as it stands to the specialist. Such modification and revision as it undergoes are a mere elimination of certain scientific difficulties, and the general reduction to a lower intellectual level. The material is not translated into life-terms, but is directly offered as a substitute for, or an external annex to, the child's present life.

Three typical evils result: In the first place, the lack of any organic connection with what the child has already seen and felt and loved makes the material purely formal and symbolic. There is a sense in which it is impossible to value too highly the formal and the symbolic. The genuine form, the real symbol, serve as methods in the holding and discovery of truth. They are tools by which the individual pushes out most surely and widely into unexplored areas. They are means by which he brings to bear whatever of reality he has succeeded in gaining in past searchings. But this happens only when the symbol really symbolizes—when it stands for and sums up in shorthand actual experiences which the individual has already gone through. A symbol which is induced from without, which has not been led up to in preliminary activities, is, as we say, a *bare* or *mere* symbol; it is dead and barren. Now, any fact, whether of arithmetic, or geography, or grammar, which is not led up to and into out of something which has previously occupied a significant position in the child's life for its own sake, is forced into this position. It is not a reality, but just the sign of a reality which *might* be experienced if certain conditions were fulfilled. But the abrupt presentation of the fact as something known by others, and requiring only to be studied and learned by the child, rules out such conditions of fulfilment. It condemns the fact to be a hieroglyph: it would mean something if one only had the key. The clue being lacking, it remains an idle curiosity, to fret and obstruct the mind, a dead weight to burden it.

The second evil in this external presentation is lack of motivation. There are not only no facts or truths which have been previously felt as such with which to appropriate and assimilate the new, but there is no craving, no need, no demand. When the subject-matter has been psychologized, that is, viewed as an outgrowth of present tendencies and activities, it is easy to locate in the present some obstacle, intellectual, practical, or ethical, which can be handled more adequately if the truth in question be mastered. This need supplies motive for the learning. An end which is the child's own carries him on to possess the means of its accomplishment. But when material is directly supplied in the form of a lesson to be learned as a lesson, the connecting links of need and aim are conspicuous for their absence. What we mean by the mechanical and dead in instruction is a result of this lack of motivation. The organic and vital mean interaction—they mean play of mental demand and material supply.

The third evil is that even the most scientific matter, arranged in most logical fashion, loses this quality, when presented in external, ready-made fashion, by the time it gets to the child. It has to undergo some modification in order to shut out some phases too hard to grasp, and to reduce some of the attendant difficulties. What happens? Those things which are most significant to the scientific man, and most valuable in the logic of actual enquiry and classification, drop out. The really thought-provoking character is obscured, and the organizing function disappears. Or, as we commonly say, the child's reasoning powers, the faculty of abstraction and generalization, are not adequately developed. So the subject-matter is evacuated of its logical value, and, though it is what it is only from the logical stand-point, is presented as stuff only for "memory". This is the contradiction: the child gets the advantage neither of the adult logical formulation, nor of his own native competencies of apprehension and response. Hence the logic of the child is hampered and mortified, and we are almost fortunate if he does not get actual non-science, flat and commonplace residua of what was gaining scientific vitality a generation or two ago—degenerate reminiscence of what someone else once formulated on the basis of the experience that some further person had, once upon a time, experienced.

The train of evils does not cease. It is all too common for opposed erroneous theories to play straight into each other's hands. Psychological considerations may be slurred or shoved on one side; they cannot be crowded out. Put out of the door, they come back through the window. Somehow and somewhere motive must be appealed to, connection must be established between the mind and its material. There is no question of getting along without this bond of connection; the only question is whether it be such as grows out of the material itself in relation to the mind, or be imported and hitched on from some outside source. If the subject-matter of the lessons be such as to have an appropriate place within the expanding consciousness of the child, if it grows out of his own past doings, thinkings, and sufferings, and grows into application in further achievements and receptivities, then no device or trick of method has to be resorted to in order to enlist "interest". The psychologized *is* of interest—that is, it is placed in the whole of conscious life so that it shares the worth of that life. But the externally presented material, that, conceived and generated in standpoints and attitudes remote from the child, and developed in motives alien to him, has no such place of its own. Hence the recourse to adventitious leverage to push it in, to factitious drill to drive it in, to artificial bribe to lure it in.

Three aspects of this recourse to outside ways for giving the subject-matter some psychological meaning may be worth mentioning. Familiarity breeds contempt, but it also breeds something like affection. We get used to the chains we wear, and we miss them when removed. 'Tis an old story that through custom we finally embrace what at first wore a hideous mien. Unpleasant, because meaningless, activities may get agreeable if long enough persisted in. *It is possible for the mind to develop interest in a routine or mechanical procedure, if conditions are continually supplied which demand that mode of operation and preclude any other sort.* I frequently hear dulling devices and empty exercises defended and extolled because "the children take such an 'interest' in them". Yes, that is the worst of it; the mind, shut out from worthy employ and missing the taste of adequate performance, comes down to the level of that which is left to it to know and do, and perforce takes an interest in a cabined and cramped experience. To find satisfaction in its own exercise is the normal law of mind, and if large and meaningful business for the mind be denied, it tries to content itself with the formal movements that remain to it—and too often succeeds, save in those cases of more intense activity which cannot accommodate themselves, and that make up the unruly and *déclassé* of our school product. An interest in the formal apprehension of symbols and in their memorized reproduction becomes in many pupils a substitute for the original and vital interest in reality; and all because, the subject-matter of the course of study being out of relation to the concrete mind of the individual, some substitute bond to hold it in some kind of working relation to the mind must be discovered and elaborated.

The second substitute for living motivation in the subject-matter is that of contrast-effects; the material of the lesson is rendered interesting, if not in itself, at least in contrast with some alternative experience. To learn the lesson is more interesting than to take a scolding, be held up to general ridicule, stay after school, receive degradingly low marks, or fail to be promoted. And very much of what goes by the name of "discipline", and prides itself upon opposing the doctrines of a soft pedagogy and upon upholding the banner of effort and duty, is nothing more or less than just this appeal to "interest" in its obverse aspect—to fear, to dislike of various kinds of physical, social, and personal pain. The subject-matter does not appeal; it cannot appeal; it lacks origin and bearing in a growing experience. So the appeal is to the thousand-and-one outside and irrelevant agencies which may serve to throw, by sheer rebuff and rebound, the mind back upon the material from which it is constantly wandering.

Human nature being what it is, however, it tends to seek its motivation in the agreeable rather than in the disagreeable, in direct pleasure rather than in alternative pain. And so has come up the modern theory and practice of the "interesting", in the false sense of that term. The material is still left; so far as its own characteristics are concerned, just material externally selected and formulated. It is still just so much geography and arithmetic and grammar study; not so much potentiality of child-experience with regard to language, earth, and numbered and measured reality. Hence the difficulty of bringing the mind to bear upon it; hence its repulsiveness; the tendency for attention to wander; for other acts and images to crowd in and expel the lesson. The legitimate way out is to transform the material; to psychologize it—that is, once more, to take it and to develop it within the range and scope of the child's life. But it is easier and simpler to leave it as it is, and then by trick of method to *arouse* interest, to *make* it *interesting*; to cover it with sugar-coating; to conceal its barrenness by intermediate and unrelated material; and finally, as it were, to get the child to swallow and digest the unpalatable morsel while he is enjoying tasting something quite different. But alas for the analogy! Mental assimilation is a matter of consciousness; and if the attention has not been playing upon the actual material, that has not been apprehended, nor worked into faculty.

How, then, stands the case of Child *v.* Curriculum? What shall the verdict be? The radical fallacy in the original pleadings with which we set out is the supposition that we have no choice save either to leave the child to his own unguided spontaneity or to inspire direction upon him from without. Action is response; it is adaptation, adjustment. There is no such thing as sheer self-activity possible—because all activity takes place in a medium, in a situation, and with reference to its conditions. But, again, no such thing as imposition of truth from without, as insertion of truth from without, is possible. All depends upon the activity which the mind itself undergoes in responding to what is presented from without. Now, the value of the formulated wealth of knowledge that makes up the course of study is that it may enable the educator *to determine the environment of the child*, and thus by indirection to direct. Its primary value, its primary indication, is for the teacher, not for the child. It says to the teacher: Such and such are the capacities, the fulfilments, in truth and beauty and behaviour, open to these children. Now see to it that day by day the conditions are such that *their own activities* move inevitably in this direction, toward such culmination of themselves. Let the child's nature fulfil its own destiny, revealed to you in whatever of science and art and industry the world now holds as its own.

The case is of Child. It is his present powers which are to assert themselves; his present capacities which are to be exercised; his present attitudes which are to be realized. But save as the teacher knows, knows wisely and thoroughly, the race-experience which is embodied in that thing we call the Curriculum, the teacher knows neither what the present power, capacity, or attitude is, nor yet how it is to be asserted, exercised, and realized

ESSAYS FROM *THE ELEMENTARY SCHOOL RECORD*

No. I.—GROUPS I AND II

(THE KINDERGARTEN: CHILDREN UNDER SIX YEARS OF AGE)

(*a*) AS REGARDS PLAY AND GAMES

Play is not to be identified with anything which the child externally does. It rather designates his mental attitude in its entirety and in its unity. It is the free play, the interplay, of all the child's powers, thoughts, and physical movements, in embodying, in a satisfying form, his own images and interests. Negatively, it is freedom from economic pressure—the necessities of getting a living and supporting others—and from the fixed responsibilities attaching to the special callings of the adult. Positively, it means that the supreme end of the child is fulness of growth—fulness of realization of his budding powers, a realization which continually carries him on from one plane to another.

This is a very general statement, and taken in its generality is so vague as to be innocent of practical bearing. Its significance in detail, in application, however, means the possibility, and in many respects the necessity, of quite a radical change of kindergarten procedure. To state it baldly, the fact that "play" denotes the psychological attitude of the child, not his outward performances, means complete emancipation from the necessity of following any given or prescribed system, or sequence of gifts, plays, or occupations. The judicious teacher will certainly look for suggestions to the activities mentioned by Froebel (in his *Mother-Play* and elsewhere), and to those set forth in such minute detail by his disciples; but she will also remember that the principle of play requires her carefully to investigate and criticise these things, and decide whether they are really activities for her own children, or just things which may have been vital in the past to children living in different social conditions. So far as occupations, games, &c., simply perpetuate those of Froebel and his earlier disciples, it may fairly be said that in many respects the presumption is against them—the presumption is that in the worship of the external doings discussed by Froebel we have ceased to be loyal to his principle.

The teacher must be absolutely free to get suggestions from any and from every source, asking herself but these two questions: Will the proposed mode of play appeal to the child as his own? Is it something of which he has the instinctive roots in himself, and which will mature the capacities that are struggling for manifestation in him? And again: Will the proposed activity give that sort of expression to these impulses that will carry the child on to a higher plane of consciousness and action, instead of merely exciting him, and then leaving him just where he was before, plus a certain amount of nervous exhaustion and appetite for more excitation in the future?

There is every evidence that Froebel studied carefully—inductively we might now say—the children's plays of his own time, and the games which mothers played with their infants. He also took great pains—as in his *Mother-Play*—to point out that certain principles of large import were involved. He had to bring his generation to consciousness of the fact that these things were not merely trivial and childish because done by children, but were essential factors in their growth. But I do not see the slightest evidence that he supposed that just these plays, and only these plays, had meaning, or that his philosophic explanation had any motive beyond that just suggested. On the contrary, I believe that he expected his followers to exhibit their following by continuing his own study of contemporary conditions and activities, rather than by literally adhering to the plays he had collected. Moreover, it is hardly likely that Froebel himself would contend that in his interpretation of these games he did more than take advantage of the best psychological and philosophical insight available to him at the time; and we may suppose that he would have been the first to welcome the growth of a better and more extensive psychology (whether general, experimental, or as child study), and would avail himself of its results to reinterpret the activities, to discuss them more critically, going from the new stand-point into the reasons that make them educationally valuable.

(*b*) SYMBOLISM

It must be remembered that much of Froebel's symbolism is the product of two peculiar conditions of his own life and work. In the first place, on account of inadequate knowledge at that time of the physiological and psychological facts and principles of child growth, he was often forced to resort to strained and artificial explanations of the value attaching to the plays, &c. To the impartial observer it is obvious that many of his statements are cumbrous and far-fetched, giving abstract philosophical reasons for matters that may now receive a simple, everyday formulation. In the second place, the general political and social conditions of Germany were such that it was impossible to conceive continuity between the free, co-operative social life of the kindergarten and that of the world cluster of suggestions, reminiscences, and anticipations that gather about the things he uses. The more natural and straightforward these are, the more definite basis there is for calling up and holding together all the allied suggestions which make his imaginative play really representative. The simple cooking, dish-washing, dusting, &c., which the children do are no more prosaic or utilitarian to them than would be, say, the game of the Five Knights. To the children these occupations are surcharged with a sense of the mysterious values that attach to whatever their elders are concerned with. The materials, then, must be as "real", as direct and straightforward, as opportunity permits.

But the principle does not end here—the reality symbolized must also lie within the capacities of the child's own appreciation. It is sometimes thought the use of the imagination is profitable in the degree it stands for very remote metaphysical and spiritual principles. In the great majority of such cases it is safe to say that the adult deceives himself. He is conscious of both the reality and the symbol, and hence of the relation between them. But since the truth or reality represented is far beyond the reach of the child, the supposed symbol is not a symbol to him at all. It is simply a positive thing on its own account. Practically about all he gets out of it is its own physical and sensational meaning, plus, very often, a glib facility in phrases and attitudes that he learns are expected of him by the teacher—without, however, any mental counterpart. We often teach insincerity, and instil sentimentalism, and foster sensationalism when we think we are teaching spiritual truths by means of symbols. The realities reproduced, therefore, by the child should be of as familiar, direct, and real a character as possible. It is largely for this reason that in the kindergarten of our School the work centres so largely about the reproduction of home and neighbourhood life. This brings us to the topic of

(*d*) SUBJECT-MATTER

The home life in its setting of house, furniture, utensils, &c., together with the occupations carried on in the home, offers, accordingly, material which is in a direct and real relationship to the child, and which he naturally tends to reproduce in imaginative form. It is also sufficiently full of ethical relations and suggestive of moral duties to afford plenty of food for the child on his moral side. The programme is comparatively unambitious compared with that of many kindergartens, but it may be questioned whether there are not certain positive advantages in this limitation of the subject-matter. When much ground is covered (the work going over, say, industrial society, army, church, state, &c.), there is a tendency for the work to become over-symbolic.

So much of this material lies beyond the experience and capacities of the child of four and five that practically all he gets out of it is the physical and emotional reflex—he does not get any real penetration into the material itself. Moreover, there is danger, in these ambitious programmes, of an unfavourable reaction upon the child's own intellectual attitude. Having covered pretty much the whole universe in a purely make-believe fashion, he becomes blasé, loses his natural hunger for the simple things of direct experience, and approaches the material of the first grades of the primary school with a feeling that he has had all that already. The later years of a child's life have their own rights, and a superficial, merely emotional anticipation is likely to do the child serious injury.

Moreover, there is danger that a mental habit of jumping rapidly from one topic to another be induced. The little child has a good deal of patience and endurance of a certain type. It is true that he has a liking for novelty and variety; that he soon wearies of an activity that does not lead out into new fields and open up new paths for exploration. My plea, however, is not for monotony. There is sufficient variety in the activities, furnishings, and instrumentalities of the homes from which the children come, to give continual diversity. It touches the civic and the industrial life at this and that point; these concerns can be brought in, when desirable, without going beyond the unity of the main topic. Thus there is an opportunity to foster that sense which is at the basis of attention, and of all intellectual growth—a sense of continuity.

This continuity is often interfered with by the very methods that aim at securing it. From the child's stand-point unity lies in the subject-matter—in the present case, in the fact that he is always dealing with one thing: home life. Emphasis is continually passing from one phase of this life to another; one occupation after another, one piece of furniture after another, one relation after another, &c., receive attention; but they all fall into building up one and the same mode of living, although bringing now this feature, now that into prominence. The child is working all the time *within a unity*, giving different phases of its clearness and definiteness, and bringing them into coherent connection with each other. When there is a great diversity of subject-matter, continuity is apt to be sought simply on the formal side; that is, in schemes of sequence, "schools of work", a rigid programme of development followed with every topic, a "thought for the day" from which the work is not supposed to stray. As a rule such sequence is purely intellectual, hence is grasped only by the teacher, quite passing over the head of the child. Hence the programme for year, term, month, week, &c., should be made out on the basis of estimating how much of the common subject-matter can be covered in that time, not on the basis of intellectual or ethical principles. This will give both definiteness and elasticity.

(*e*) METHOD

The peculiar problem of the early grades is, of course, to get hold of the child's natural impulses and instincts, and to utilize them so that the child is carried on to a higher plane of perception and judgment, and equipped with more efficient habits: so that he has an enlarged and deepened consciousness, and increased control of powers of action. Wherever this result is not reached, play results in mere amusement and not in educative growth.

Upon the whole, constructive or "built up" work (with, of course, the proper alternation of story, song, and game which may be connected, so far as is desirable, with the ideas involved in the construction) seems better fitted than anything else to secure these two factors—initiation in the child's own impulse, and termination upon a higher plane. It brings the child in contact with a great variety of material: wood, tin, leather, yarn, &c.; it supplies a motive for using these materials in real ways instead of going through exercises having no meaning except a remote symbolic one; it calls into play alertness of the senses and acuteness of observation; it demands clear-cut imagery of the ends to be accomplished, and requires ingenuity and invention in planning; it makes necessary concentrated attention and personal responsibility in execution, while the results are in such tangible form that the child may be led to judge his own work and improve his standards.

A word should be said regarding the psychology of imitation and suggestion in relation to kindergarten work. There is no doubt that the little child is highly imitative and open to suggestions; there is no doubt that his crude powers and immature consciousness need to be continually enriched and directed through these channels. But on this account it is imperative to discriminate between a use of imitation and suggestion which is so external as to be thoroughly non-psychological, and a use which is justified through its organic relation to the child's own activities. As a general principle no activity should be *originated* by imitation. The start must come from the child; the model or copy may then be supplied in order to assist the child in imaging more definitely what it is that he really wants—in bringing him to consciousness. Its value is not as model to copy in action, but as guide to clearness and adequacy of conception. Unless the child can get away from it to his own imagery when it comes to execution, he is rendered servile and dependent, not developed. Imitation comes in to reinforce and help out, not to initiate.

There is no ground for holding that the teacher should not suggest anything to the child until he has *consciously* expressed a want in that direction. A sympathetic teacher is quite likely to know more clearly than the child himself what his own instincts are and mean. But the suggestion must *fit in* with the dominant mode of growth in the child; it must serve simply as stimulus to bring forth more adequately what the child is already blindly striving to do. Only by watching the child and seeing the attitude that he assumes towards suggestions can we tell whether they are operating as factors in furthering the child's growth, or whether they are external, arbitrary impositions interfering with normal growth.

The same principle applies even more strongly to so-called dictation work. Nothing is more absurd than to suppose that there is no middle term between leaving a child to his own unguided fancies and likes or controlling his activities by a formal succession of dictated directions. As just intimated, it is the teacher's business to know what powers are striving for utterance at a given period in the child's development, and what sorts of activity will bring these to helpful expression, in order then to supply the requisite stimuli and needed materials. The suggestion, for instance, of a playhouse, the suggestion that comes from seeing objects that have already been made to furnish it, from seeing other children at work, is quite sufficient definitely to direct the activities of a normal child of five. Imitation and suggestion come in naturally and inevitably, but only as instruments to help him carry out his own wishes and ideas. They serve to make him realize, to bring to consciousness, of what he already is striving for in a vague, confused, and therefore ineffective way. From the psychological standpoint it may safely be said that when a teacher has to rely upon a series of dictated directions, it is just because the child has no image of his own of what is to be done or why it is to be done. Instead, therefore, of gaining power of control by conforming to directions, he is really losing it—made dependent upon an external source.

In conclusion, it may be pointed out that both the subject-matter and the method connect directly with that of Group III, the six-year-old children. The play reproduction of the home life passes naturally on into a more extended and serious study of the larger social occupations upon which the home is dependent (see p. 72); while the continually increasing demands made upon the child's own ability to plan and execute carry him over into more controlled use of attention upon more distinctively intellectual topics. It must not be forgotten that the readjustment needed to secure continuity between "kindergarten" and "six year old" work cannot be brought about wholly from the side of the latter. The school change must be as gradual and insensible as that in the growth of the child. This is impossible unless the kindergarten work surrenders whatever isolates it, and hospitably welcomes whatever materials and resources will keep pace with the full development of the child's powers, and thus keep him always prepared, ready for the next work he has to do.

No. II.—GROUP III

(AVERAGE AGE 6 YEARS)

GENERAL PRINCIPLES OF WORK, EDUCATIONALLY CONSIDERED

Little children have their observations and thoughts mainly directed towards people: what they do, how they behave, what they are occupied with, and what comes of it. Their interest is of a personal rather than of an objective or intellectual sort. Its intellectual counterpart is the story-form, not the task, consciously defined end, or problem—meaning by story-form something psychical, the holding together of a variety of persons, things, and incidents through a common idea that enlists feeling; not an outward relation or tale. Their minds seek wholes, varied through episode, enlivened with action and defined in salient features—there must be go, movement, the sense of use and operation. Inspection of things must not be separated from the idea by which they are carried. Analysis of isolated detail of form and structure neither appeals nor satisfies.

The material selected as the basis of this year's study, existing social occupations, is designed to meet and feed this attitude. The previous years the children have been concerned with the occupations of the home, and the contact of homes with one another and with outside life. Now they take up typical occupations of society at large—a step further removed from the child's egoistic, self absorbed interest, and yet dealing with something personal and something which touches him.

From the stand-point of educational theory, the following features may be noted:—

1. The study of natural objects, processes, and relations is placed in a human setting. During the year, a considerably detailed observation of seeds and their growth, of plants, woods, stones, animals, as to some phases of structure and habit, of geographical conditions of landscape, climate, arrangement of land and water, is undertaken. The pedagogical problem is to direct the child's power of observation, to nurture his sympathetic interest in characteristic traits of the world in which he lives, to afford interpreting material for later more special studies, and yet to supply a carrying medium for the variety of facts and ideas through the dominant spontaneous emotions and thoughts of the child. Hence their association with human life. Absolutely no separation is made between the "social" side of the work (its concern with people's activities and their mutual dependencies) and the "science" (regard for physical facts and forces)—because the conscious

distinction between man and nature is the result of later reflection and abstraction, and to force it upon the child here is not only to fail to engage his whole mental energy, but to confuse and distract him. The environment is always that in which life is situated and through which it is circumstanced; and to isolate it, to make it with little children an object of observation and remark by itself, is to treat human nature inconsiderately. At last, the original open and free attitude of the mind to nature is destroyed; nature has been reduced to a mass of meaningless details.

In its emphasis upon the "concrete" and "individual", modern pedagogical theory often loses sight of the fact that the existence and presentation of an individual physical thing, a stone, an orange, a cat, is no guarantee of *concreteness*—that this last is a psychological affair, and appeals to the mind as a whole, as a self-sufficient centre of interest and attention. The reaction from this external and somewhat dead stand-point often assumes, however, that the needed clothing with human significance can come only by direct personification, and we have that continued symbolization of a plant, cloud or rain which makes only pseudo-science possible, which instead of generating love for nature itself, switches interest to certain sensational and emotional accompaniments, and leaves it, at last, dissipated and burnt out.

And even the tendency to approach nature through the medium of literature, the pine-tree through the fable of the discontented pine, &c., while recognizing the need of the human association, fails to note that there is a more straightforward road from mind to the object—direct through connection with life itself; and that the poem and story, the literary statement, have their place as reinforcements and idealizations, not as foundation-stones. What is wanted, in other words, is not to fix up a connection of child mind and nature, but to give free and effective play to the connection already operating.

2. This suggests at once the practical questions that are usually discussed under the name of "correlation", questions of such interaction of the various matters studied and powers under acquisition as will avoid waste, and maintain unity of mental growth. From the stand-point adopted the problem is one of differentiation, rather than of correlation as ordinarily understood. The unity of life, as it presents itself to the child, binds together and carries along the different occupations, the diversity of plants, animals, and geographic conditions; drawing, modelling, games, constructive work, numerical calculations are ways of carrying certain features of it to mental and emotional satisfaction and completeness. Not much attention is paid in this year to reading and writing; but it is

obvious that if this were regarded as desirable, the same principle would apply. It is the community and continuity of the subject-matter that organizes, that correlates; correlation is not through devices of instruction which the teacher employs in tying together things in themselves disconnected.

3. Two recognized demands of primary education are often, at present, not unified, or are even opposed. The need of the familiar, the already experienced, as a basis for moving upon the unknown and remote, is a commonplace. The claims of the child's imagination as a factor is at least beginning to be recognized. The problem is to work these two forces together, instead of separately. The child is too often given drill upon familiar objects and ideas under the sanction of the first principle, while he is introduced with equal directness to the weird, strange, and impossible to satisfy the claims of the second. The result, it is hardly too much to say, is a twofold failure. There is no special connection between the unreal, the myth, the fairy tale, and the play of mental imagery. Imagination is not a matter of an impossible subject-matter, but a constructive way of dealing with any subject-matter, under the influence of a pervading idea. The point is not to dwell with wearisome iteration upon the familiar; and under the guise of object-lessons to keep the senses directed at material which they have already made

acquaintance with; but to enliven and illumine the ordinary commonplace, and homely by using it to build up and appreciate situations previously unrealized and alien. And this also is culture of imagination. Some writers appear to have the impression that the child's imagination has outlet only in myth and fairy tale of ancient time and distant place, or in weaving egregious fabrications regarding sun, moon, and stars; and have even pleaded for a mythical investiture of all "science"—as a way of satisfying the dominating imagination of the child. But fortunately these things are exceptions, are intensifications, are relaxations of the average child; not his pursuits. The John and Jane that most of us know let their imaginations play about the current and familiar contacts and events of life—about father and mother and friend, about steamboats and locomotives, and sheep and cows, about the romance of farm and forest, of seashore and mountain. What is needed, in a word is to afford occasion by which the child is moved to educe and exchange with others his store of experiences, his range of information, to make new observations correcting and extending them in order to keep his images moving, in order to find mental rest and satisfaction in definite and vivid realization of what is new and enlarging.

While, doubtless, there are many other subjects which would meet these demands, it is found that the one in question, existing social occupations, affords a sufficient answer to be worth following out.

Note by the Editor.—The special occupations selected for these children centred round the farm, and the products of farm industry. Materials for Number Exercises, for Music, Art Work, Shop-work, Cooking, and Sewing all came within the field of activity.

No. III.—GROUP IV

(AVERAGE AGE 7 TO 7½)

HISTORICAL DEVELOPMENT OF INVENTIONS AND OCCUPATIONS

As what has been said about Group III, regarding imagination and experienced fact, regarding correlation, and regarding the relation of the social or human and science or physical aspects of the work, applies equally well here, it remains only to note the traits which differentiate the work.

The work is taken up historically, with its factors drawn out longitudinally, so to speak, instead of as they are co-existent in current life.

1. This permits and requires greater definiteness, corresponding to the gain of mental concentration made in the year—greater abstractness, if the word is used in the sense of an intentional simplification of existing experience, through elimination of certain elements and emphasis of others, conducted to bring out a special idea. For instance, farming, as studied in the previous year, simply shows what certain people do; what things they come in contact with, how they use them, and how the farmer serves other people. The agricultural stage taken

in historic perspective, while reviewing much of this material, throws emphasis upon the peculiar needs in man's life which call forth this occupation, and the way in which it reacts upon the make-up of society. In one case, the matter is taken up as a situation to be realized; in the other as something whose typical motive and effects are to be discovered and traced. The historical statement is used, then, as a method of *analysis* of existing social life, not as affording information about something past and gone—although it is found that the children take in much of the material got together by anthropologists.

2. The historic approach also requires attention to the sequence and order of progress in its larger and more obvious features; it brings into play ideas of causality, and of logical dependence, if these terms are used not in an abstruse sense, but as meaning imaginative consideration of the needs that call forth one mode of occupation, the devices and inventions that attach themselves, the way the invention reacts upon life and calls into play new powers, new modes of association, and leads to dealing with natural objects and forces hitherto unmastered. Orderly and cumulative narrative is, indeed, logic in its concrete form, the form which appeals to the child mind of this age.

3. This suggests the use which is made of the interest in the primitive and savage which so

many observers have noted as characteristic of this period of childhood. The aim is to avoid a mere excitation and indulgence of this interest, through dwelling in an unrelated way upon sensational or picturesque features of it, without regard to the motives lying behind them, the stimulus given to further advance, or the ways in which men have got out of savagery into civilization. The effort is to lay hold of this interest in such a way as to use it as a projective—to bring out its defects as well as its dramatic incidents, to see how and why men worked their way out of it. The literary idealizations of such life—like Ab and Hiawatha—are used not as the basis and end of the work, but as means of developing and vivifying the personal realization of some of its features. It should also be noted that the use of material from primitive life does not mean that it is supposed to have any pre-ordained or exclusive value in reference to this period of child-life. It is simply one of many possible modes of approach, selected chiefly because its greater simplicity gives a means of analysing *present* life as indicated above.

4. The general principle mentioned, under Group III, as to the human setting of observation of natural things, may be exemplified here with reference to geography. During the previous year, there is continuous incidental attention to natural features in connection with modes of life, bringing-up of

different, children's experiences of fields, woods, hills, &c., observation of and comparison with the children's own present surroundings. But in this year, there is an imaginative abstraction and arrangement of these natural features, corresponding to the selection and sequence already spoken of upon the historical side. With each phase of industry, attention is concentrated upon its natural habitat—mountainous woods for hunting, &c., and as one occupation succeeds to another, the children travel in imagination till they find the locality especially suitable. Meantime in their clay and sand maps each new environment is added to those previously brought up, until all the main features of physiographic structure have been both introduced and placed in their relationships to one another. Thus the child is left with a picture of a typical section of the earth's surface, of the way in which its various features, mountains, uplands, river valley, and sea, connect with one another, and with the activities of human life.

Note by the Editor.—The special occupations for this Group are described as starting with "picnic and camping-out experiences", in order to realize the evolution of occupations, including inventions and discoveries (nomadic, agricultural, metal-working). Geography, Number, Reading and Writing, Music, Art, Shop-work, Cooking, and Sewing all found a place.

No. IV.—GROUPS V AND VI

(AVERAGE AGE 7½ TO 8½)

GENERAL INTRODUCTION

In the general plan of the organization of the school three periods of work are noticed, corresponding to three phases of child growth. The first is that in which the child is taken up with direct and outgoing activity, on the basis of the images and emotions that possess his mind. There is always physical, motor activity; and there is always a story, drama, image—a mental whole. But the two are not separate from each other. Acts are not (to the *child consciousness*, I mean) means for realizing ideas; they are just their spontaneous overflow and exhibition. The child's thoughts are not something *to be* realized; they are not projected in the future as ends; they are the living meaning and value that saturate whatever he does. Hence this is called the play period; the whole bent is toward acting out of images, thus giving them vividness and a place in life.

The work of the first four years of the school (from age four to eight) is based upon the working theory that the child's attitude is predominantly of this sort; and that it is premature to force upon him work whose essence, psychologically, is the separation of means and ends; the divorce of elements, steps, and acts from some idea for the sake of which they exist. Hence the relatively slight and incidental attention to reading, writing, and number during the sixth and seventh years, and the attempt to introduce geography and science in a synthetic, living, rather than analytic and morphological, way. (See p. 39.) This is not because such things are "hard" and the child ought to be amused; it is not because the importance of forms and symbols in civilization and in individual development are not appreciated. It is simply because the child's psychical attitude at this time is less specialized than such work demands; because the latter introduces a separation of acts and ideas which tends to make the former conventional and mechanical, and the latter remote and incomprehensible.

But, of course, it is not supposed that conscious relating of means and ends is wholly absent in this period, or that there is no need of anticipating the later development. On the contrary, even with six-year-old children consciousness dawns, of a certain sort, of ends somewhat remote, and consequently the child is interested in regulating his acts so as to reach the end. In watching a group of six-year-old children playing "hide and coop", I noticed the following: About half of the children played the game, *i.e.* they planned their movements to get to the goal first. The other half were carried away with what they were immediately doing; if the one who was "it" got to running away from the goal, he kept on running, in spite of the fact that others were making for the goal. Their present activity was so immensely satisfying that it was impossible to check and guide it by some result to be reached, even such a simple one as touching the goal first.

But the fact that some did thus direct their acts shows a change of attitude; it suggests that this change comes more easily, and hence earlier, in activities where the result is tangible and practical than where it is intellectual and abstract. It arises, for example, far more naturally in making a box, which the child is interested in putting to some use, or in cooking a cereal to be eaten at lunch, than in learning to read or calculate for the sake of some distant use. The active and constructive work of the children of ages six and seven (Groups III and IV) therefore includes activities which combine an immediate appeal to the child as outlet of his energy, with leading up, in an orderly way, to a result ahead. It thus forms habits of working for ends and for controlling present occupation so as, by a sequence of steps, to accomplish something beyond. These habits may be gradually transferred to ends more consciously conceived and more remote.

The eighth year seems to be markedly one of such transition; with the average nine-year-old there is evident dislike of attempting results to which the means at command are felt to be inadequate. The child, for example, objects to the kind of drawings formerly made with delight, because he sees them as results, and hence as crude and even absurd, instead of just feeling them as parts of his own present life. In the tenth year there is often a conscious demand for "something hard", something which will test and call out power, efficiency in selection and adaptation of means to ends.

Hence this is the period, in increasing measure, of acquisition of skill, of "technique"—something, of course, which applies to geography as well as drawing, to cooking as well as music, to history as well as reading. Its psychological reality is the mental presentation of an end to be reached, making it necessary to select—to analyse—the required means (the elements, forms, symbols), and then to follow regular order, method, "rules", in using the means to get the result.

But in recognizing that this is the period of technique, of getting facility, skill, in particular directions, we must keep in mind certain fundamental principles. First, as already intimated, the growth is gradual. It comes in reading before in writing; in both before in numbers (this does not mean, of course that the child may not with great interest have *used* numbers, as distinct from analysing them and learning the rules for their use), and [illegible] all of these subjects before in science. It may well be questioned whether one of the reasons for the comparatively small success of science in elementary education up to this time is not to be found in premature emphasis upon the strictly intellectual phases of it. Our experience proves that children of eight and nine are interested in experimental work in science; but it is not because they first conceive certain problems and ideas, and then regard the experiment as a way of solving the problem or testing the theory. On the contrary, such an interest hardly shows itself before the age of thirteen or fourteen. They take hold of the experimentation as they do of constructive work, or cooking; it is the active performance of a series of steps and seeing "what happens" at each step that occupy their minds. And the technical interest in history and literature comes even later; in such things the interest in the imagined and felt totality, the story-form (see p. 63), lasts and resists objective analysis longest.

Secondly, the interest in technique, in acquiring skill, demands, in order not to lead to arrested development, a sufficient background of actual experience. Even if children of six and seven were psychologically ready for analysis, for attention to form and symbols and rules, very few of them have had the range of vital experience which would make it profitable for them to devote themselves very exclusively to the former at the expense of the latter. Hence, once more, attention must still be directed to positive subject-matter that enlarges and deepens their world of imagination and thought, rather than to analysing an experience they have not yet got, or learning rules for doing things that make no personal appeal to them.

And, in the third place, the *introduction* to technique must come *in connection with ends that arise within the children's own experience,*[1] *that are present to them as desired ends, and hence as motives to effort.* The too frequent assumption is that it is enough for the teacher to see the end; and that because, as matter of fact, a child is going to need a certain power, this is a sufficient basis upon which to engage him in its acquisition. But the prime psychological necessity is that the child see and feel the end as *his own end,* the need as his own need, and thus have a motive from within, an inherent and impelling motive, for making the analysis and mastering the "rules", *i.e.* methods of procedure. This is possible only as the formal work is kept in connection with active, constructive, and expressive work, which, presenting difficulties, suggests the need of acquiring an effective method of coping with them. This is the form which "correlation" takes at this period.

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[1] Cf. page 40.

On account of these three principles, while the aim of the instructor is in this period to bring the child to the possession of certain powers, or skills, (1) there is no abrupt transition; (2) the child is still kept mainly occupied with positive subject-matter and with direct, expressive, and constructive activities in order to supply occasions for originating felt problems or difficulties, and motives for solving them; and (3) the technical exercises are selected from such material. Moreover, in order that the circuit may be complete (4) additional concrete material or occupation is supplied upon or in which the child may use his newly-acquired power and thus realize its value.

Note by the Editor.—In the curriculum of Group V may be noted American Indians, and literature, geography, &c., connected with them; then Great Discoverers; Reading of *Robinson Crusoe*; Practical Gardening; Physical Geography. Group VI introduces Local History and Geography, and especially Chicago; then on to other States and Colonies. Science, Cooking, Shop-work, &c., all kept up and related to human experience as imaged in the historical and geographical situations.

No. V.—GROUPS VII AND VIII

(AVERAGE AGE 10½ AND 11)

PSYCHOLOGY OF OCCUPATIONS

In the first and second numbers (pp. 48 and 63) there was given some account of the mental attitude of little children as expressed in the familiar terms of play and imagination. In the third number (p. 70) was a description of the change of attitude that takes place when the child becomes conscious of the distinction between means and ends, and of the necessity of adjusting the former to the latter. In this number I shall speak of the psychology which controls the educational use of occupations.

By occupation is not meant any kind of "busy work", or exercises that may be given to a child in order to keep him out of mischief or idleness when seated at his desk. By occupation I mean a mode of activity on the part of the child which reproduces, or runs parallel to, some form of work carried on in social life. In the University Elementary School these occupations are represented by the shop-work with wood and tools; by cooking, sewing, and by the textile work.

The fundamental point in the psychology of an occupation is that it maintains a balance between the intellectual and the practical phases of experience. As an occupation it is active or motor; it finds expression through the physical organs—the eyes, hands, &c. But it also involves continual observation of materials, and continual planning and reflection, in order that the practical or executive side may be successfully carried on. Occupation as thus conceived must, therefore, be carefully distinguished from work which educates primarily for a trade. It differs because its end is in itself; in the growth that comes from the continual interplay of ideas and their embodiment in action, not in external utility.

It is possible to carry on this type of work in other than trade schools, so that the entire emphasis falls upon the manual or physical side. In such cases the work is reduced to a mere routine or custom, and its educational value is lost. This is the inevitable tendency wherever, in manual training, for instance, the mastery of certain tools, or the production of certain objects, is made the primary end, and the child is not given, wherever possible, intellectual responsibility for selecting the materials and instruments that are most fit, and given an opportunity to think out his own model and plan of work, led to perceive his own errors, and find out how to correct them—that is, of course, within the range of his capacities. So far as the external result is held in view, rather than the mental and moral states and growth involved in the process of reaching the result, the work may be called manual, but cannot rightly be termed an occupation. Of course the tendency of all mere habit, routine, or custom is to result in what is unconscious and mechanical. That of occupation is to put the maximum of consciousness into whatever is done.

This enables us to interpret the stress laid (*a*) upon personal experimenting, planning, and re-inventing in connection with the textile work, and (*b*) its parallelism with lines of historical development. The first requires the child to be mentally quick and alert at every point in order that he may do the outward work properly. The second enriches and deepens the work performed by saturating it with values suggested from the social life which it recapitulates.

Occupations, so considered, furnish the ideal occasions for both sense-training and discipline in thought. The weakness of ordinary lessons in observation, calculated to train the senses, is that they have no outlet beyond themselves, and hence no necessary motive. Now, in the natural life of the individual and the race there is always a reason for sense-observation. There is always some need, coming from an end to be reached, that makes one look about to discover and discriminate whatever will assist him. Normal sensations operate as clues, as aids, as stimuli, in directing activity in what has to be done; they are not ends in themselves. Separated from real needs and motives, sense-training becomes a mere gymnastic and easily degenerates into acquiring what are hardly more than mere knacks or tricks in observation, or else mere excitement of the sense organs.

The same principle applies in normal *thinking*. It also does not occur for its own sake, nor end in itself. It arises from the need of meeting some difficulty, in reflecting upon the best way of overcoming it, and thus leads to planning, to projecting mentally the result to be reached, and deciding upon the steps necessary and their serial order. This concrete logic of action long precedes the logic of pure speculation or abstract investigation, and through the mental habits that it forms is the best of preparations for the latter.

Another educational point upon which the psychology of occupations throws helpful light is the place of interest in school work. One of the objections regularly brought against giving in school work any large or positive place to the child's interest is the impossibility on such a basis of proper selection. The child, it is said, has all kinds of interests, good, bad, and indifferent. It is necessary to decide between the interests that are really important and those that are trivial; between those that are helpful and those that are harmful; between those that are transitory or mark immediate excitement, and those which endure and are permanently influential. It would seem as if we had to go beyond interest to get any basis for using interest.

Now, there can be no doubt that occupation-work possesses a strong interest for the child. A glance into any school where such work is carried on will give sufficient evidence of this fact. Outside of the school, a large portion of the children's plays are simply more or less miniature and haphazard attempts at reproducing social occupations. There are certain reasons for believing that the type of interest which springs up along with these occupations is of a thoroughly healthy, permanent, and really educative sort; and that by giving a larger place to occupations we should secure an excellent, perhaps the very best, way of making an appeal to the child's spontaneous interest, and yet have, at the same time, some guarantee that we are not dealing with what is merely pleasure-giving, exciting, or transient.

In the first place, every interest grows out of some instinct, or some habit that in turn is finally based upon an original instinct. It does not follow that all instincts are of equal value, or that we do not inherit many instincts which need transformation, rather than satisfaction, in order to be useful in life. But the instincts which find their conscious outlet and expression in occupation are bound to be of an exceedingly fundamental and permanent type. The activities of life are of necessity directed to bringing the materials and forces of nature under the control of our purposes; of making them tributary to ends of life. Men have had to work in order to live. In and through their work they have mastered nature, they have protected and enriched the conditions of their own life, they have been awakened to the sense of their own powers—have been led to invent, to plan, and to rejoice in the acquisition of skill. In a rough way, all occupations may be classified as gathering about man's fundamental relations to the world in which he lives through getting food to maintain life; securing clothing and shelter to protect and ornament it, and thus, finally, to provide a permanent home in which all the higher and more spiritual interests may centre. It is hardly unreasonable to suppose that interests which have such a history behind them must be of the worthy sort.

However, these interests as they develop in the child not only recapitulate past important activities of the race, but reproduce those of the child's present environment. He continually sees his elders engaged in such pursuits. He daily has to do with things which are the results of just such occupations. He comes in contact with facts that have no meaning, except in reference to them. Take these things out of the present social life and see how little would remain—and this not only on the material side, but as regards intellectual, æsthetic, and moral activities, for these are largely and necessarily bound up with occupations. The child's instinctive interests in this direction are, therefore, constantly reinforced by what he sees, feels, and hears going on around him. Suggestions along this line are continually coming to him; motives are awakened; his energies are stirred to action. Again, it is not unreasonable to suppose that interests which are touched so constantly, and on so many sides, belong to the worthy and enduring type.

In the third place, one of the objections made against the principle of interest in education is that it tends to disintegration of mental economy by constantly stirring up the child in this way or that, destroying continuity and thoroughness. But an occupation, a textile occupation for example, is of necessity a continuous thing. It lasts not only for days but for months and years. It represents, not a stirring of isolated and superficial energies, but rather a steady, continuous organization of power along certain general lines. The same is true, of course, of any other form of occupation, such as shop-work with tools, or as cooking. The occupations articulate a vast variety of impulses, otherwise separate and spasmodic, into a consistent skeleton with a firm backbone. It may well be doubted whether, wholly apart from some such regular and progressive modes of action, extending as cores throughout the entire school, it would be permanently safe to give the principle of "interest" any large place in school-work.

Note by the Editor.—Group VII carried the History on to the Revolutionary Period, and treated the Geography in connection with commercial problems of colonial times. In Textiles, Cotton-spinning was practised; in Number, Decimals and Percentage. French was commenced, &c. The next Group commenced Latin and also Elementary Physics, and in Number took up the Metric System.

No. VI.—GROUPS IX AND X

(AVERAGE AGE 12 AND 13)

REFLECTIVE ATTENTION

With the development of reflective attention come the need and the possibility of a change in the mode of the child's instruction. In the second number I spoke of the direct, spontaneous attitude that marks the child till into his seventh year—his demand for new experiences, and his desire to complete his partial experiences by building up images and expressing them in play. This attitude is typical of what writers call spontaneous attention, or, as some say, non-voluntary attention.

The child is simply absorbed in what he is doing; the occupation in which he is engaged lays complete hold upon him. He gives himself without reserve. Hence, while there is much energy spent, there is no *conscious* effort; while the child is intent, to the point of engrossment, there is no *conscious* intention.

With the development of a sense of more remote ends, and of the need of directing acts so as to make them means for these ends (a matter discussed in the third number), we have the transition to what is termed indirect, or, as some writers prefer to say, voluntary, attention. A result is imaged, and the child attends to what is before him or what he is immediately doing because it helps to secure the result. Taken by itself, the object or the act might be indifferent or even repulsive. But because it is felt to belong to something desirable or valuable, it borrows the latter's attracting and holding power.

This is the transition to "voluntary" attention, but only the transition. The latter comes fully into being only when the child entertains results in the form of problems or questions, the solution of which he is to seek for himself. In the intervening stage (in the child from eight to, say, eleven or twelve), while the child directs a series of intervening activities on the basis of some end he wishes to reach, this end is something to be done or made, or some tangible result to be reached; the problem is a practical difficulty, rather than an intellectual question. But with growing power, the child can conceive of the end as something to be found out, discovered; and can control his acts and images so as to help in the enquiry and solution. This is reflective attention proper.

It is illustrated in the studies and occupations of Groups IX and X in this number—especially the latter. In history work there is change from the story and biography form, from discussion of questions that arise, to the formulation of questions. Points about which difference of opinion is possible, matters upon which experience, reflection, &c., can be brought to bear, are always coming up in history. But to use the discussion to develop this matter of doubt and difference into a definite problem, to bring the child to feel just what the difficulty is; and then throw him upon his own resources in looking up material bearing upon the point, and upon his judgment in bringing it to bear, or getting a solution, is a marked intellectual advance. So in the science studies there is a change from the practical attitude of making and using cameras to the consideration of the problems intellectually involved in this—to principles of light, angular measurements, &c., which give the theory or explanation of the practice. In Latin there is the change from hearing and reading stories, speaking and writing answers upon certain points, to problems of inflection and syntax—bringing to light the theoretical significance of matters already practically dealt with.

In general, this growth is a natural psychical process. But the proper recognition and use of it is perhaps the most serious problem in instruction upon the intellectual side. A person who has gained the power of reflective attention, the power to hold problems, questions, before the mind, *is* in so far, intellectually speaking, educated. He has mental discipline—power *of* the mind and *for* the mind. Without this the mind remains at the mercy of custom and external suggestions. Some of the difficulties may be barely indicated by referring to an error that almost dominates instruction of the usual type. Too often it is assumed that attention can be given directly to any subject-matter, if only the proper will or disposition be at hand, failure being regarded as a sign of unwillingness or indocility. Lessons in arithmetic, geography, and grammar are put before the child, and he is told to attend in order to learn. But excepting as there is some question, some doubt, present in the mind as a *basis* for this attention, *reflective* attention is impossible. If there is sufficient *intrinsic* interest in the material, there will be direct or spontaneous attention, which is excellent so far as it goes, but which barely of itself does not give power of thought or internal mental control. If there is not an inherent attracting power in the material, then (according to his temperament and training, and the precedents and expectations of the school) the teacher will either attempt to surround the material with foreign attractiveness, making a bid or offering bribe for attention by "making the lesson interesting";[1] or else will resort to counter-irritants (low marks, threats of non-promotion, staying after school, personal disapprobation, expressed in a great variety of ways, naggings, continuous calling upon the child to "pay attention", &c.); or, probably, will use some of both means.

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[1] See p. 45 above.

But (1) the attention thus gained is never more than partial, or divided; and (2) it always remains dependent upon something external—hence, when the attraction ceases or the pressure lets up, there is little or no gain in inner or intellectual control. And (3) such attention is always for the sake of "learning", i.e. *memorizing ready-made answers to possible questions to be put by another.* True, reflective attention, on the other hand, always involves judging, reasoning, deliberation; it means that the child has a *question of his own*, and is actively engaged in seeking and selecting relevant material with which to answer it, considering the bearings and relations of this material—the kind of solution it calls for. The problem is one's own, hence also the impetus, the stimulus to attention, is one's own; hence also the training secured is one's own—it is discipline, or gain in power of control; that is, a *habit* of considering problems.

It is hardly too much to say that in the traditional education so much stress has been laid upon the presentation to the child of ready-made material (books, object-lessons, teacher's talks, &c.), and the child has been so almost exclusively held to bare responsibility for reciting upon this ready-made material, that there has been only accidental occasion and motive for developing reflective attention. Next to no consideration has been paid to the fundamental necessity—leading the child to realize a problem as his own, so that he is self-induced to attend in order to find out its answer. So completely have the conditions for securing this self-putting of problems been neglected that the very idea of voluntary attention has been radically perverted. It is regarded as measured by unwilling effort—as activity called out by foreign and so repulsive material under conditions of strain, instead of as self-initiated effort. "Voluntary" is treated as meaning the reluctant and disagreeable instead of the free, the self-directed, through personal interest, insight, and power.

Here I have spoken only of the fundamental nature of reflective attention—as depending upon interest in a conscious problem. In a later number I shall speak of the methods employed in the school to secure this interest.

Note by the Editor.—The course of study for these Groups does not seem to have been marked out in as great detail as for the others; the ground covered in History is indicated in the last paragraphs of the next Essay, No. VII. The method of treatment was to provide an abundance of reading material to [illegible] in the solution of problems proposed for investigation. Latin, Art, Music, &c., continued. Science extended to problems of Sanitation.

No. VII.—THE AIM OF HISTORY IN ELEMENTARY EDUCATION

If history be regarded as just the record of the past, it is hard to see any grounds for claiming that it should play any large rôle in the curriculum of elementary education. The past is the past, and the dead may be safely left to bury its dead. There are too many urgent demands in the present, too many calls over the threshold of the future, to permit the child to become deeply immersed in what is forever gone by. Not so when history is considered as an account of the forces and forms of social life. Social life we have always with us; the distinction of past and present is indifferent to it. Whether it was lived just here or just there is a matter of slight moment. It is life for all that; it shows the motives which draw men together and push them apart, and depicts what is desirable and what is hurtful. Whatever history may be for the scientific historian, for the educator it must be an indirect sociology—a study of society which lays bare its process of becoming and its modes of organization. Existing society is both too complex and too close to the child to be studied. He finds no clues into its labyrinth of detail, and can mount no eminence whence to get a perspective of arrangement.

If the aim of historical instruction is to enable the child to appreciate the values of social life, to see in imagination the forces which favour and let men's effective co-operation with one another, to understand the sorts of character that help on and that hold back, the essential thing in its presentation is to make it moving, dynamic. History must be presented not as an accumulation of results or effects, a mere statement of what happened, but as a forceful, acting thing. The motives—that is, the motors, must stand out. To study history is not to amass information, but to use information in constructing a vivid picture of how and why men did thus and so, achieved their successes and came to their failures.

When history is conceived as dynamic, as moving, its economic and industrial aspects are emphasized. These are but technical terms which express the problem with which humanity is unceasingly engaged; how to live, how to master and use nature so as to make it tributary to the enrichment of human life. The great advances in civilization have come through those manifestations of intelligence which have lifted man from his precarious subjection to nature, and revealed to him how he may make its forces co-operate with his own purposes. The social world in which the child now lives is so rich and full that it is not easy to see how much it cost, how much effort and thought lie back of it. Man has a tremendous equipment ready at hand. The child may be led to translate these ready-made resources into fluid terms; he may be led to see man face to face with nature, without inherited capital, without tools, without manufactured materials. And, step by step, he may follow the processes by which man recognized the needs of his situation, thought out the weapons and instruments that enable him to cope with them; and may learn how these new resources opened new horizons of growth and created new problems. The industrial history of man is not a materialistic or merely utilitarian affair. It is a matter of intelligence. Its record is the record of how man learned to think, to think to some effect, to transform the conditions of life so that life itself became a different thing. It is an ethical record as well; the account of the conditions which men have patiently wrought out to serve their ends.

The question of how human beings live, indeed, represents the dominant interest with which the child approaches historic material. It is this point of view which brings those who worked in the past close to the beings with whom he is daily associated, and confers upon him the gift of sympathetic penetration.

The child who is interested in the way in which men lived, the tools they had to do with, the new inventions they made, the transformations of life that arose from the power and leisure thus gained, is eager to repeat like processes in his own action, to remake utensils, to reproduce processes, to rehandle materials. Since he understands their problems and their successes only by seeing what obstacles and what resources they had from nature, the child is interested in field and forest, ocean and mountain, plant and animal. By building up a conception of the natural environment in which lived the people he is studying, he gets his hold upon their lives. This reproduction he cannot make excepting as he gains acquaintance with the natural forces and forms with which he is himself surrounded. The interest in history gives a more human colouring, a wider significance, to his own study of nature. His knowledge of nature lends point and accuracy to his study of history. This is the natural "correlation" of history and science.

This same end, a deepening appreciation of social life, decides the place of the biographic element in historical instruction. That historical material appeals to the child most completely and vividly when presented in individual form, when summed up in the lives and deeds of some heroic character, there can be no doubt. Yet it is possible to use biographies so that they become a collection of mere stories, interesting, possibly, to the point of sensationalism, but yet bringing the child no nearer to comprehension of social life. This happens when the individual who is the hero of the tale is isolated from his social environment; when the child is not brought to feel the social situations which evoked his acts and the social progress to which his deeds contributed. If biography is presented as a dramatic summary of social needs and achievements, if the child's imagination pictures the social defects and problems that clamoured for the man and the ways in which the individual met the emergency, then the biography is an organ of social study.

A consciousness of the social aim of history prevents any tendency to swamp history in myth, fairy story, and merely literary renderings. I cannot avoid the feeling that much as the Herbartian school has done to enrich the elementary curriculum in the direction of history, it has often inverted the true relationship existing between history and literature. In a certain sense the *motif* of American colonial history and of De Foe's *Robinson Crusoe* are the same. Both represent man who has achieved civilization, who has attained a certain maturity of thought, who has developed ideals and means of action; but suddenly thrown back upon his own resources, having to cope with a raw and often hostile nature, and to regain success by sheer intelligence, energy, and persistence of character. But when *Robinson Crusoe* supplies the material for the curriculum of the third- or fourth-grade child, are we not putting the cart before the horse? Why not give the child the reality with its much larger sweep, its intenser forces, its more vivid and lasting value for life, using the *Robinson Crusoe* as an imaginative idealization in a particular case of the same sort of problems and activities? Again, whatever may be the worth of the study of savage life in general, and of the North American Indians in particular, why should that be approached circuitously through the medium of *Hiawatha* instead of at first hand? employing, indeed, the poem to furnish the idealized and culminating touches to a series of conditions and struggles which the child has previously realized in more specific form. Either the life of the Indian presents some permanent questions and factors in social life, or it has next to no place in a scheme of instruction. If it has such a value, this should be made to stand out on its own account, instead of being lost in the very refinement and beauty of a purely literary presentation.

The same end, the understanding of character and social relations in their natural dependence, enables us, I think, to decide upon the importance to be attached to chronological order in historical instruction. Considerable stress has of late been laid upon the supposed necessity of following the development of civilization through the successive steps in which it actually took place—beginning with the valleys of the Euphrates and the Nile, and coming on down through Greece, Rome, &c. The point urged is that the present depends upon the past, and each phase of the past upon a prior past.

We are here introduced to a conflict between the logical and psychological interpretation of history. If the aim be an appreciation of what social life is and how it goes on, then, certainly, the child must deal with what is near in spirit, not with the remote. The difficulty with the Babylonian or Egyptian life is not so much its remoteness in time, as its remoteness from the present interests and aims of social life. It does not simplify enough and it does not generalize enough; or, at least, it does not do so in the right way. It does it by omission of what is significant now, rather than by presenting these factors arranged on a lower scale. Its salient features are hard to get at and to understand, even by the specialist. It undoubtedly presents factors which contributed to later life, and which modified the course of events in the stream of time. But the child has not arrived at a point where he can appreciate abstract causes and specialized contributions. What he needs is a picture of typical relations, conditions, and activities. In this respect, there is much of prehistoric life which is much closer to him than the complicated and artificial life of Babylon or of Egypt. When a child is capable of appreciating institutions, he is capable of seeing what special institutional idea each historic nation stands for, and what factor it has contributed to the present complex of institutions. But this period arrives only when the child is beginning to be capable of abstracting causes in other realms as well; in other words, when he is approaching the time of secondary education.

The principle stated, together with the applications indicated to industrial history, to biography and story, and to chronological sequence, will explain, in a general way, the programme of historical study adopted in Groups IV to X. In this general scheme three periods or phases are recognized: first comes the generalized and simplified history—history which is hardly history at all in the local or chronological sense, but which aims at giving the child insight into, and sympathy with, a variety of social activities. This period includes the work of the six-year-old children in studying typical occupations of people in the country and city at present; of the seven-year-old children in working out the evolution of inventions and their effect upon life; and of the eight-year-old children in dealing with the great movements of migration, exploration, and discovery which have brought the whole round world into human ken. The work of the first two years is evidently quite independent of any particular people or any particular person—that is, of historical data in the strict sense of the term. At the same time, plenty of scope is provided through dramatization for the introduction of the individual factor. The account of the great explorers and the discoverers serves to make the transition to what is local and specific, that which depends upon certain specified persons who lived at certain specified places and times.

This introduces us to the second period, where local conditions and the definite activities of particular bodies of people become prominent—corresponding to the child's growth in power of dealing with limited and positive fact. Since Chicago, since the United States, are localities with which the child can, by the nature of the case, most effectively deal, the material of the next three years is derived directly and indirectly from this source. Here, again, the third year is a transitional year, taking up the connections of American life with European. By this time the child should be ready to deal not with social life in general, or even with the social life with which he is most familiar, but with certain thoroughly differentiated and, so to speak, peculiar types of social life; with the special significance of each and the particular contribution it has made to the whole world history. Accordingly, in the next period the chronological order is followed, beginning with the ancient world about the Mediterranean and coming down again through European history to the peculiar and differentiating factors of American history.

The programme is not presented as the only one meeting the problem, but as a contribution, the outcome not of thought but of considerable experimenting and shifting of subjects from year to year, to the problem of giving material which takes vital hold upon the child; and at the same time leads on, step by step, to more thorough and accurate knowledge of both the principles and facts of social life, and makes a preparation for later specialized historic studies.

No. VIII.

THE PSYCHOLOGY OF THE ELEMENTARY CURRICULUM

(AND THE UNIVERSITY AS A PLACE FOR PSYCHOLOGICAL INVESTIGATION)

As the current number closes the present series of monographs relating to the work of the Elementary School, a statement of the principles underlying its work may be in place. The present month[1] happens also to end the fifth year of the school's existence, if further justification for the statement be required.

Naturally, most of the public is interested in what goes on day by day in a school in direct relation to the children there. This is true of parents who send their boys and girls for the sake of the personal results they wish to secure, not for the sake of contributing to educational theory. In the main, it is true of visitors to a school who recognize, in varying degrees, what is actually done with the children before their eyes, but who rarely have either the interest or time to consider the work in relation to underlying problems. A school cannot lose sight of this aspect of its work, since only by

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December, 1900.

attending to it can the school retain the confidence of its patrons and the presence of its pupils.

Nevertheless a school conducted by a department of a university must have another aspect. From the university stand-point, the most important part of its work is the scientific—the contribution it makes to the progress of educational thinking. The aim of educating a certain number of children would hardly justify a university in departing from the tradition which limits it to those who have completed their secondary instruction. Only the scientific aim, the conduct of a laboratory, comparable to other scientific laboratories, can furnish a reason for the maintenance by a university of an elementary school.

But since this phase is likely to be the last to show itself to the ordinary observer, since it is the most difficult to understand, there is ground for setting forth this university aspect of the work done in the elementary school of the University of Chicago. But most generally, the school is a laboratory of applied psychology. That is, it has a place for the study of mind as manifested and developed in the child, and for the search after materials and agencies that seem most likely to fulfil and further the conditions of normal growth.

It is not a normal school or a department for the training of teachers. It is not a model school. It is not intended to demonstrate any one special idea or doctrine. Its task is the problem of viewing the education of the child in the light of the principles of mental activity and processes of growth made known by modern psychology. The problem by its nature is an infinite one. All that any school can do is to make contributions here and there, and to stand for the necessity of considering education, both theoretically and practically, in this light. This being the end, the school conditions must, of course, agree. To endeavour to study the process and laws of growth under such artificial conditions as prevent many of the chief facts of child life from showing themselves, is an obvious absurdity.

In its practical aspect, this laboratory problem takes the form of the construction of a course of study which harmonizes with the natural history of the growth of the child in capacity and experience. The question is the selection of the kind, variety, and due proportion of subjects, answering most definitely to the dominant needs and powers of a given period of growth, and of those modes of presentation that will cause the selected material to enter vitally into growth. We cannot admit too fully or too freely the limits of our knowledge and the depths of our ignorance in these matters. No one has a complete hold scientifically upon the chief psychological facts of any one year of child life. It would be sheer presumption to claim that just the material best fitted to promote this growth has as yet been discovered. The assumption of an educational laboratory is rather that enough is known of the conditions and modes of growth to make intelligent enquiry possible; and that it is only by acting upon what is already known that more can be found out. The chief point is such experimentation as will add to our reasonable convictions. The demand is to secure arrangements that will permit and encourage freedom of investigation; that will give some assurance that important facts will not be forced out of sight; conditions that will enable the educational practice indicated by the enquiry to be sincerely acted upon, without the distortion and suppression arising from undue dependence upon tradition and preconceived notions. It is in this sense that the school would be an experimental station in education.

What, then, are the chief working hypotheses that have been adopted from psychology? What educational counterparts have been hit upon as in some degree in line with the adopted psychology?

The discussion of these questions may be approached by pointing out a contrast between contemporary psychology and the psychology of former days. The contrast is a triple one. Earlier psychology regarded mind as a purely individual affair in direct and naked contact with an external world. The only question asked was of the ways in which the world and the mind acted upon each other. The entire process recognized would have been in theory exactly the same if there were one mind living alone in the universe. At present the tendency is to conceive individual mind as a function of social life—as not capable of operating or developing by itself, but as requiring continual stimulus from social agencies, and finding its nutrition in social supplies. The idea of heredity has made familiar the notion that the equipment of the individual, mental as well as physical, is an inheritance from the race: a capital inherited by the individual from the past and held in trust by him for the future. The idea of evolution has made familiar the notion that mind cannot be regarded as an individual monopolistic possession, but represents the outworkings of the endeavour and thought of humanity; that it is developed in an environment which is social as well as physical, and that social needs and aims have been most potent in shaping it—that the chief difference between savagery and civilization is not in the naked nature which each faces, but the social heredity and social medium.

Studies of childhood have made it equally apparent that this socially acquired inheritance operates in the individual only under present social stimuli. Nature must indeed furnish its physical stimuli of light, sound, heat, &c., but the significance attaching to these, the interpretation made of them, depends upon the way in which the society in which the child lives, acts, and reacts in reference to them. The bare physical stimulus of light is not the entire reality; the interpretation given to it through social activities and thinking confers upon it its wealth of meaning. It is through imitation, suggestion, direct instruction, and even more indirect unconscious tuition, that the child learns to estimate and treat the bare physical stimuli. It is through the social agencies that he recapitulates in a few short years the progress which it has taken the race slow centuries to work out.

Educational practice has exhibited an unconscious adaptation to and harmony with the prevailing psychology; both grew out of the same soil. Just as mind was supposed to get its filling by direct contact with the world, so all the needs of instruction were thought to be met by bringing the child-mind into direct relation with various bodies of external fact labelled geography, arithmetic, grammar, &c. That these classified sets of facts were simply selections from the social life of the past was overlooked; equally so that they had been generated out of social situations and represented the answers found for social needs. No social element was found in the subject-matter nor in the intrinsic appeal which it made to the child; it was located wholly outside in the teacher—in the encouragements, admonitions, urgings, and devices of the instructor in getting the child's mind to work upon a material which in itself was only accidentally lighted up by any social gleam. It was forgotten that the maximum appeal, and the full meaning in the life of the child, could be secured only when the studies were presented not as bare external studies, but from the stand-point of the relation they bear to the life of society. It was forgotten that to become integral parts of the child's conduct and character they must be assimilated not as mere items of information, but as organic parts of his present needs and aims—which in turn are social.

In the second place, the older psychology was a psychology of knowledge, of intellect. Emotion and endeavour occupied but an incidental and derivative place. Much was said about sensations—next to nothing about movements. There was discussion of ideas and of whether they originated in sensations or in some innate mental faculty; but the possibility of their origin in and from the needs of action was ignored. Their influence upon conduct, upon behaviour, was regarded as an external attachment. Now we believe (to use the words of Mr. James) that the intellect, the sphere of sensations and ideas, is but a "middle department which we sometimes take to be final, failing to see, amidst the monstrous diversity of the length and complications of the cogitations which may fill it, that it can have but one essential function—the function of defining the direction which our activity, immediate or remote, shall take".

Here also was a pre-established harmony between educational practice and psychological theory. Knowledge in the schools was isolated and made an end in itself. Facts, laws, information, have been the staple of the curriculum. The controversy in educational theory and practice was between those who relied more upon the sense element in knowledge, upon contact with things, upon object-lessons, &c., and those who emphasized abstract ideas, generalizations, &c.—reason, so-called, but in reality other people's ideas as formulated in books. In neither case was there any attempt to connect either the sense training or the logical operations with the problems and interests of the life of practice. Here again an educational transformation is indicated if we are to suppose that our psychological theories stand for any truths of life.

The third point of contrast lies in the modern conception of the mind as essentially a process—a process of growth, not a fixed thing. According to the older view mind was mind, and that was the whole story. Mind was the same throughout, because fitted out with the same assortment of faculties whether in child or adult. If any difference was made it was simply that some of these ready-made faculties—such as memory—came into play at an earlier time, while others, such as judging and inferring, made their appearance only after the child through memorizing drills, had been reduced to complete dependence upon the thought of others. The only important difference that was recognized was one of quantity, of amount. The boy was a little man and his mind was a little mind—in everything but size the same as that of the adult, having its own ready-furnished equipment of faculties of attention, memory, &c. Now we believe in the mind as a growing affair, and hence as essentially changing, presenting distinctive phases of capacity and interest at different periods. These are all one and the same in the sense of continuity of life, but all different in that each has its own distinctive claims and offices. "First the blade, then the ear, and then the full corn in the ear."

It is hardly possible to overstate the agreement of education and psychology at this point. The course of study was thoroughly, even if unconsciously, controlled by the assumption that since mind and its faculties are the same throughout, the subject-matter of the adult, logically-arranged facts and principles, is the natural "study" of the child—simplified and made easier of course, since the wind must be tempered to the shorn lamb. The outcome was the traditional course of study in which again child and adult minds are absolutely identified, except as regards the mere matter of amount or quantity of power. The entire range of the universe is first subdivided into sections called studies; then each one of these studies is broken up into bits, and some one bit assigned to a certain year of the course. No order of development was recognized—it was enough that the earlier parts were made easier than the later. To use the pertinent illustration of Mr. Jackman in stating the absurdity of this sort of curriculum: "It must seem to geography teachers that Heaven smiled on them when it ordained but four or five continents, because starting in far enough along the course it was so easy, that it really seemed to be natural, to give one continent to each grade, and then come out right in the eight years."

If once more we are in earnest with the idea of mind as growth, this growth carrying with it typical features distinctive of its various stages, it is clear that an educational transformation is again indicated. It is clear that the selection and grading of material in the course of study must be done with reference to proper nutrition of the dominant directions of activity in a given period, not with reference to chopped-up sections of a ready-made universe of knowledge.

It is, of course, comparatively easy to lay down general propositions like the foregoing; easy to use them to criticise existing school conditions; easy by means of them to urge the necessity of something different. But art is long. The difficulty is in carrying such conceptions into effect—in seeing just what materials and methods, in what proportion and arrangement, are available and helpful at a given time. Here again we must fall back upon the idea of the laboratory. There is no answer in advance to such questions as these. Tradition does not give it, because tradition is founded upon a radically different psychology. Mere reasoning cannot give it, because it is a question of fact. It is only by trying that such things can be found out. To refuse to try, to stick blindly to tradition, because the search for the truth involves experimentation in the region of the unknown, is to refuse the only step which can introduce rational conviction into education.

Hence the following statement simply reports various lines of enquiry started during the last five years, with some of the results more recently indicated. These results can, of course, make no claim to be other than tentative, excepting in so far as a more definite consciousness of what the problems are, clearing the way for more intelligent action in the future, is a definitive advance. It should also be stated that practically it has not as yet been possible, in many cases, to act adequately upon the best ideas obtained, because of administrative difficulties, due to lack of funds—difficulties centring in the lack of a proper building and appliances, and in inability life is broken up (see p. 90). The mere play of activity no longer directly satisfies. It must be felt to accomplish something—to lead up to a definite and abiding outcome. Hence the recognition of rules of action—that is, of regular means appropriate to reaching permanent results—and of the value of mastering special processes so as to give skill in their use.

Hence, on the educational side, the problem is, as regards the subject-matter, to differentiate the vague unity of experience into characteristic typical phases, selecting such as clearly illustrate the importance to mankind of command over specific agencies and methods of thought and action in realizing its highest aims. The problem on the side of method is an analogous one: to bring the child to recognize the necessity of a similar development within himself—the need of securing for himself practical and intellectual control of such methods of work and enquiry as will enable him to realize results for himself.

On the more direct social side, American history (especially that of the period of colonization) is selected as furnishing a typical example of patience, courage, ingenuity, and continual judgment in adapting means to ends, even in the face of great hazard and obstacle; while the material itself is so definite, vivid, and human as to come directly within the range of the child's representative and constructive imagination, and thus becomes, vicariously at least, a part of his own expanding consciousness. Since the aim is not "covering the ground", but knowledge of social processes used to secure social results, no attempt is made to go over the entire history, in chronological order, of America. Rather a series of types is taken up: Chicago and the north-western Mississippi valley; Virginia, New York, and the Puritans and Pilgrims in New England. The aim is to present a variety of climatic and local conditions, to show the different sorts of obstacles and helps that people found, and a variety of historic traditions, and customs, and purposes of different people.

The method involves presentation of a large amount of detail, of minutiæ of surroundings, tools, clothing, household utensils, foods, modes of living day by day, so that the child can reproduce the material as life, not as mere historic information. In this way, social processes and results become realities. Moreover, to the personal and dramatic identification of the child with the social life studied, characteristic of the earlier period, there now supervenes an *intellectual* identification—the child puts himself at the stand-point of the problems that had to be met, and rediscovers, so far as may be, ways of meeting them.

The general stand-point—the adaptation of means to ends—controls also the work in science. For purposes of convenience, this may be regarded as now differentiated into two sides—the geographical and the experimental. Since, as just stated, the history work depends upon an appreciation of the natural environment as affording resources and presenting urgent problems, considerable attention is paid to the physiography, mountains, rivers, plains, and lines of natural travel and exchange, flora and fauna of each of the colonies. This is connected with field excursions in order that the child may be able to supply from observation, as far as possible, the data to be used by constructive imagination in reproducing more remote environments.

The experimental side devotes itself to a study of processes which yield typical results of value to men. The activity of the child in the earlier period is directly productive, rather than investigative. His experiments are modes of active doing—almost as much so as his play and games. Later he tries to find out how various materials or agencies are manipulated in order to give certain results. It is thus clearly distinguished from experimentation in the scientific sense—such as is appropriate to the secondary period—where the aim is the discovery of facts and verification of principles. Since the practical interest predominates, it is a study of applied science rather than of pure science. For instance, processes are selected found to have been of importance in colonial life—bleaching, dyeing, soap and candle-making, manufacture of pewter dishes, making of cider and vinegar, leading to some study of chemical agencies, of oils, fats, elementary metallurgy. "Physics" is commenced from the same applied stand-point. A study is made of the use and transfer of energy in the spinning-wheel and looms; everyday uses of mechanical principles are taken up—in locks, scales, &c., going on later to electric appliances and devices—bells, the telegraph, &c.

The relation of means to ends is emphasized also in other lines of work. In art, attention is given to practical questions of perspective, of proportion of spaces and masses, balance, effect of colour combinations and contrasts, &c. In cooking, the principles of food-composition and of effects of various agencies upon these elements are taken up, so that the children may deduce, as far as possible, their own rules. In sewing, methods of cutting, fitting (as applied to dolls' clothing) come up, and later on the technical sequence of stitches, &c.

It is clear that with the increasing differentiation of lines of work and interest, leading to greater individuality and independence in various studies, great care must be taken to find the balance between, on one side, undue separation and isolation, and on the other, a miscellaneous and casual attention to a large number of topics, without adequate emphasis and distinctiveness to any. The first principle makes work mechanical and formal, divorces it from the life-experience of the child, and from effective influence upon conduct. The second makes it scrappy and vague, and leaves the child without definite command of his own powers, or clear consciousness of purposes. It is perhaps only in the present year that the specific principle of the conscious relation of means to ends has emerged as the unifying principle of this period; and it is hoped that emphasis of this in all lines of work will have a decidedly cumulative and unifying effect upon the child's development.

Nothing has been said, as yet, of one of the most important agencies or means in extending and controlling experience—command of the social or conventional symbols—symbols of language, including those of quantity. The importance of these instrumentalities is so great that the traditional or three R's curriculum is based upon them—from sixty to eighty per cent of the time programme of the first four or five years of elementary schools being devoted to them, the smaller figure representing selected rather than average schools.

These subjects are social in a double sense. They represent the tools which society has evolved in the past as the instruments of its intellectual pursuits. They represent the keys which will unlock to the child the wealth of social capital which lies beyond the possible range of his limited individual experience. While these two points of view must always give these arts a highly important place in education, they also make it necessary that certain conditions should be observed in their introduction and use. In a wholesale and direct application of the studies no account is taken of these conditions. The chief problem at present relating to the three R's is recognition of these conditions and the adaptation of work to them.

The conditions may be reduced to two: (1) The need that the child shall have in his own personal and vital experience a varied background of contact and acquaintance with realities, social and physical. This is necessary to prevent symbols from becoming a purely second-handed and conventional substitute for reality. (2) The need that the more ordinary, direct, and personal experience of the child shall furnish problems, motives, and interests that necessitate recourse to books for their solution, satisfaction, and pursuit. Otherwise, the child approaches the book without intellectual hunger, without alertness, without a questioning attitude, and the result is the one so deplorably common: such abject dependence upon books as weakens and cripples vigour of thought and enquiry, combined with reading for mere random stimulation of fancy, emotional indulgence, and flight from the world of reality into a make-belief land.

The problem here is then (1) to furnish the child with a sufficiently large amount of personal activity, in occupations, expression, conversation, construction, and experimentation, so that his individuality, moral and intellectual, shall not be swamped by a disproportionate amount of the experience of others to which books introduce him; and (2) so to conduct this more direct experience as to make the child feel the need of resort to and command of the traditional social tools—furnish him with motives and make his recourse to them intelligent, an addition to his powers, instead of a servile dependency. When this problem shall be solved, work in language, literature, and number will not be a combination of mechanical drill, formal analysis, and appeal, even if unconscious, to sensational interests; and there will not be the slightest reason to fear that books and all that relates to them will not take the important place to which they are entitled.

It is hardly necessary to say that the problem is not yet solved. The common complaints that children's progress in these traditional school studies is sacrificed to the newer subjects that have come into the curriculum is sufficient evidence that the exact balance is not yet struck. The experience thus far in the school, even if not demonstrative, indicates the following probable results: (1) The more direct modes of activity, constructive, and occupation work, scientific observation, experimentation, &c., present plenty of opportunities and occasions for the necessary use of reading, writing (and spelling), and number work. These things may be introduced, then, not as isolated studies, but as organic outgrowths of the child's experience. The problem is, in a systematic and progressive way, to take advantage of these occasions. (2) The additional vitality and meaning which these studies thus secure make possible a very considerable reduction of the time ordinarily devoted to them. (3) The final use of the symbols, whether in reading, calculation, or composition, is more intelligent, less mechanical; more active, less passively receptive; more an increase of power, less a mere mode of enjoyment.

On the other hand, increasing experience seems to make clear the following points: (1) That it is possible, in the early years, to appeal, in teaching the recognition and use of symbols, to the child's power of production and creation; as much so in principle as in other lines of work seemingly much more direct, and that there is the advantage of a limited and definite result by which the child may measure his progress. (2) Failure sufficiently to take account of this fact resulted in an undue postponement of some phases of these lines of work, with the effect that the child, having progressed to a more advanced plane intellectually, feels what earlier might have been a form of power and creation to be an irksome task. (3) There is a demand for periodic concentration and alternation in the school programme of the time devoted to these studies—and of all studies where mastery of technique or special method is advisable. That is to say, instead of carrying all subjects simultaneously and at an equal pace upon the programme, at times one must be brought to the foreground and others relegated to the background, until the child is brought to the point of recognizing that he has a power or skill, which he can now go ahead and use independently.

The third period of elementary education is upon the borderland of secondary. It comes when the child has a sufficient acquaintance of a fairly direct sort with various forms of reality and modes of activity; and when he has sufficiently mastered the methods, the tools of thought, enquiry, and activity, appropriate to various phases of experience, to be able profitably to specialize upon distinctive studies and arts for technical and intellectual aims. While the school has a number of children who are in this period, the school has not, of course, been in existence long enough so that any typical inferences can be safely drawn. There certainly seems to be reason to hope, however, that with the consciousness of difficulties, needs, and resources gained in the experience of the last five years, children can be brought to and through this period without sacrifice of thoroughness, mental discipline, or command of technical tools of learning, and with a positive enlargement of life, and a wider, freer, and more open outlook upon it.

APPENDIX

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